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Roots of Creative Research*

GORDON K. TEAL

I AM MOST APPRECIATIVE of the honor in citing me as Inventor of the Year.

In accepting the award, I want to thank the many talented and stimulating associates who, in the various stages of my career, have given direct help or who have otherwise influenced me towards achieving something in a creative way.

My personal inventive career was at Bell Telephone Laboratories, an ideal environment for creative invention and innovation. There, I, like many others, experienced the excitement of learning how to exploit science for the benefit of society. Basic to whatever inventive achievements I may have been able to make was the struggle to acquire a scientific understanding.

Undoubtedly my most important inventions were connected with the development of germanium and silicon single crystals. It is hard to realize now that making single crystals of germanium and silicon could ever have been controversial.

** A speech delivered by Gordon K. Teal upon his acceptance of the Inventor of the Year Award presented to him by The PTC Research Institute at a reception held in his honor on April 20, 1967, at the Lisner Auditorium of The George Washington University.*

As I look back to see what really influenced me in critical decisions which culminated in the single crystal work and my contributions to the transistor, I note the roots of research leading to my inventions go very deep in time.

The story starts with graduate study at Brown University under Prof. Charles A. Kraus, one of the two outstanding experts on germanium chemistry in this country. My Master's and a Doctor's thesis were on the chemistry and electrochemistry of germanium and some of its compounds. Germanium was a useless material, studied only because it was chemically interesting. Had I been "mission" oriented, I may have missed a very exciting career. Concentration on germanium during my graduate study resulted in a continuing personal sentimental attachment for germanium, which to me, at least, was and is an exotic element.

The opportunity to enter a career of creative research and innovation, concerned particularly with electronic materials, I owe to Robert R. Williams and Robert M. Burns, who headed chemical research in Bell Telephone Laboratories. When they invited me to come to work at Bell Telephone Laboratories, I accepted and went there in 1930.

During the 30's, I did research on electron emissive surfaces of photocells for television pick-up, fairly complicated electron multipliers and camera tubes. Preparation, control of the composition and structure of electronic materials to achieve special electron or photo-emissive, conductive or photoconductive properties were the major concern. I made several attempts during this period to start germanium studies.

In 1940 I again proposed research on germanium and when the television activity to which I was assigned was closed down in February 1942, within two weeks I had made some germanium microwave rectifiers, using some digermene gas obtained from one of my Brown University associates of the period 1927 to 1930. While I had thought the germanium rectifier project to be an unusually good idea, I began to doubt my intuition and turned my attention to the development of some new types of resistors, including pyrolytically deposited alloy films of germanium and silicon. At a later date when germanium devices proved to be terrifically important to the war effort, I was very disappointed that I had abandoned my rectifier program. I resolved never again to doubt my own strong intuitions. This crucial, conscious decision is evidenced by my persistence in growing germanium and silicon single crystals.

The transistor invention at Bell Labs in late 1947 convinced me that

this was definitely the time to get back on germanium work. In spite of my important challenging assignment handling the chemical development of a silicon carbide varistor for a new telephone handset, my most enthusiastic thoughts were on the potential of germanium and I repeatedly made germanium research program proposals, starting in February 1948, and on through June, July and August of that year, and suggested preparing single crystals. I reasoned that removing the crystal boundaries and other undesirable defects from germanium probably would be as important to the transistor as removing the last traces of gases from the vacuum tube. In spite of this acceptable analogous reasoning, support was difficult to obtain.

One night in the latter part of September 1948, John Little (also at BTL) and I met by pure chance on a bus going into the center of Summit, New Jersey, from the Murray Hills Lab. John needed some small germanium wafers for some point contact transistors in a new mechanical design that he had conceived. His needs were an expedient opportunity of getting into an important part of germanium and transistor activity. During the remainder of the bus ride, we busily designed an equipment for pulling germanium rods, and two days later had already set up a crude machine and pulled germanium rods containing large single crystals from a crucible in an atmosphere of hydrogen. During the next few months we made better equipment and large and more perfect crystals.

Soon after growing our first crystals, I proposed a single crystal program on germanium and silicon to J. A. Morton, head of transistor development. He gave financial support and encouragement.

As the work proceeded in 1949, gradually all the scientific studies on transistors began to make use of single crystal material. As Bardeen has pointed out (*Proceedings of the Institute of Radio Engineers* [1958], p. 952) "controlled very perfect single crystals have provided, in a sense, a laboratory for study of such processes" (various electronic and physical solid-state phenomena).

Later, the single crystals were crucial in realizing the first junction transistor. About the time of Shockley's June 1949 paper on the structure and theory of the junction transistor, I suggested to Morgan Sparks, who was working with Shockley, attempting to make a junction transistor, that he and I collaborate. Within less than a year we pulled the first junction transistor.

During 1951 Ernie Buehler and I turned our attention more and more towards silicon. We pulled the first large silicon single crystals, pn, pnp, and npn junction structures.

I collaborated with Howard Christensen during 1951 and 1952 in forming a single crystal pn junction by epitaxial deposition of thin single crystal films on germanium single crystals by decomposition of germanium iodide vapor. The variety of applications of such techniques envisioned has been recorded in U.S. Patent 2,692,839 issued to us in 1954. These early efforts were cut short by my leaving Bell Labs. Much later, June 1960, epitaxial technology became an important and useful part of industrial technology.

One might think oneself lucky to have participated only in the transistor research activity at Bell Telephone Laboratories. I was doubly fortunate, however, in having the satisfaction of also participating in development of the transistor and related industry at Texas Instruments, also a most exciting place.

I went to Texas Instruments January 1, 1953, to set up their Central Research Laboratories. Pat Haggerty's visualization of TI's potentiality and plans impressed me tremendously. The success of TI in the years since has demonstrated clearly that my early confidence in him as an unusually able leader was not misplaced. Let me pay tribute too to the crucially important contributions of my other associates at TI, particularly to Mark Shepherd who is here today and who is well known for his major contributions to the semiconductor industry.

Texas Instruments was unique in industry in emphasizing grown junction transistors. My participation in this critical decision was advice given to Pat Haggerty in 1952 and later in 1953, when I went to TI. While TI captured the market with high quality transistors, competing companies struggled to make "inexpensive" transistors by other methods.

At TI, my job was to establish the environment for and to direct innovation in contrast to performing personal invention. I gradually built up a group of researchers who concentrated on programs that would lead as quickly as possible to important products. The first major goal of our program was a silicon transistor by techniques suited to mass production. We decided to go the grown junction route, by no means a simple or trivial choice. We avoided the problems such as differential expansion between silicon and alloying electrode which are inherent in the alloyed junction. Most companies took the alloy route and some the III-V intermetallics.

W. A. Adcock, M. E. Jones, Jay Thornhill and E. Jackson of our Central Research Laboratories, as history and TI stock have recorded, developed the first commercially feasible silicon transistors. I proudly announced this achievement at a national conference of the Institute

of Radio Engineers on May 10, 1954, under rather dramatic circumstances. Earlier speakers had remarked about how hopeless it was to expect the development of a silicon transistor in less than several years and advised people to be satisfied with germanium transistors for the present.

The results are highlighted in an issue of *Fortune* (November 1961), page 226:

The silicon transistor was a turning point in TI's history, for with this advance it gained a big headstart over the competition in a critical electronic product; there was no effective competition in silicon transistors until 1958. TI's sales rose almost vertically; the company was suddenly in the big leagues.

Another important relevant project undertaken in TI was the development of a chemical reduction method for bulk high purity silicon production that started TI towards becoming the leading supplier of this material to the chemical and electronic industries. Raymond Sangster and Willis Adcock, John Ross and Jim Fisher spearheaded the effort.

With the broadening and deepening torrent of developments of transistor technology in the 1950's and 60's, it is impossible even to mention much less trace the threads of the development. Diffusion, mesa, planar and epitaxial techniques developed and have made use of single crystal materials in a multitude of ways as do integrated circuits, now a major concern of semiconductor industry. TI's Central Research Laboratories contributed to these rapidly developing technologies in a variety of ways. For example, the building of complete subsystems on a silicon wafer was a part of the written plans as early as October of 1957.

I am indebted to Allen V. Astin, able and highly respected Director of the National Bureau of Standards, for the fascinating period of service that I am now having in this unique national center of excellence. Dr. Astin is here with us today.

My present activity at the National Bureau of Standards may seem unrelated to my efforts to develop useful products at Bell Telephone Laboratories and Texas Instruments, since the National Bureau of Standards does not normally seek to develop products except under national emergency conditions; however, one of our major activities is the characterization of materials that might have important scientific and technological benefits to the nation. Another aspect of our mission is to maintain a data bank of evaluated properties of matter and materials. Industry, government and the scientific community may

draw on it to make decisions and progress in areas such as exploratory studies and new product development. Because technology is rapidly becoming science based, accurate numerical data on the properties of matter and materials are increasingly critical in the everyday considerations that affect the rise and fall of corporations and even of nations.

Because science and technology stimulate and aid each other, the inventor even more frequently will be found in science-based environments offered by organizations such as Bell Telephone Laboratories and Texas Instruments. The resulting inventions are essential to creating the era of abundance about which we dream and others demand. I represent a growing class and type of scientists and engineers who will compete for future Inventor of the Year Awards from The Patent, Trademark and Copyright Research Institute.

I have been greatly helped in my creative career by the United States patent system. And I am indeed grateful to The Patent, Trademark, and Copyright Research Institute and The George Washington University for the recognition that you are giving inventors today.

Effect of Confusion Surveys in Trademark Litigation

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SUMMARY

THIS ARTICLE CONTAINS A REVIEW of a number of relatively recent cases in which confusion surveys have been used as evidence in support of confusion in trademark litigation. The weight given these surveys is analyzed and the reasons for rejection or acceptance are pinpointed. The author concludes with a checklist for use as a guide in presenting an acceptable survey.

INTRODUCTION

THE LANHAM ACT REQUIRES a finding of a *likelihood* of confusion with a previously registered mark to bar registration¹ or to impose liability for trademark infringement.² The best evidence of a likelihood of confusion is obviously *actual* confusion.

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¹ 15 U.S.C. 1052 (d).

² 15 U.S.C. 1114 (1).

Trademark attorneys, therefore, constantly search to uncover instances of actual confusion when litigating trademark matters in the hope of overcoming the uncertainties of subjective reasoning inherent in a determination of a likelihood of confusion. Towards this end one of the most common methods employed is the confusion survey or consumer-reaction poll.

This technique involves soliciting information from purchasers as to their recollection of the origin of goods bearing a specific trademark. While at one time such surveys were considered inadmissible hearsay, it is now well established that they are admissible, since the statements of the persons interviewed are offered to show their state of mind rather than for the truth they contain.³ Other observers have taken the position that there is no question of hearsay involved at all since the persons who conducted the polls will usually testify as to the results and the only question is the credibility of the witness who is before the court.⁴

Assuming the admissibility of the confusion survey in trademark litigation, the real issue is the weight or effect it will have in convincing the court that confusion exists. This paper deals with that question.

While there can be no assurance that any form of poll will meet with acceptance in the courtroom, as will be clear from the case histories that follow, it does appear that certain minimum safeguards to insure credibility must be observed. These common safeguards run like a thread through those cases which rely on a survey, while conversely, are conspicuously absent from those surveys which have been rejected.

In essence, the manner in which the poll is conducted must be fair, the questions must be framed impartially, and the answers received must not be susceptible to incongruous interpretations.

Even being ready and able to show the court that such safeguards have been incorporated into the poll may not be enough. As every lawyer knows, usurpation of the judicial function is frowned upon. The tribunal may consider the poll as a substitution for their independent judgment on the ultimate issue and discount the weight of this evidence concluding that an independent comparison of the marks and their uses, based on their own observations, is just as good. This is especially true where the poll involves only a limited number of

³ E.g., *International Milling Co. v. Robin Hood Popcorn Co., Inc.*, 110 *U.S.P.Q.* 368 (Com'r 1956).

⁴ *United States v. 88 Cases, more or less*, 187 F.2d 967 (3rd Cir. 1951).

interviews, and a fortiori, a limited, nonrepresentative picture. On the other hand, the sample submitted may be formidable, but the inherent distrust of judicial tribunals of "canned" or prepared evidence may result in its having little probative value.

Nevertheless, the application of the consumer survey in trademark litigation can be especially valuable in those situations where likelihood of confusion is on the borderline. This "extra" evidence, even if entitled to little weight, can be just enough to sway the balance. Therefore, it should not be dismissed as a tactic.

A number of relatively recent cases in which confusion surveys have been relied upon have been selected at random and analyzed. These cases have been collected and reprinted below in a pertinent and convenient reference form.

Certain guidelines as to question form and technique can be deduced from the cases as an aid in framing a survey which will be given considerable weight in evidence. Perhaps more important, errors which led to the litigant's downfall can be pinpointed.

The case histories have been divided into two categories: (1) those in which little or no weight was given to the survey; and (2) those where the survey was given considerable weight. While a comparison of these cases will reveal discrepancies in reasoning and attitudes in various forums, they will also reveal the basic characteristics necessary in an acceptable survey, as well as the pitfalls to be avoided.

OBSERVATIONS

Having read the foregoing case histories, many questions can immediately be raised by the reader concerning the wisdom and inconsistencies of some of the decisions. However, it is not our purpose to dispute the holdings, the law applied, or manner in which the decision was reached.

It is our purpose to note that, by whatever route or rationale, six of the 18 cases analyzed, or 33 percent, gave considerable weight to a confusion survey introduced into evidence. Thus, the confusion survey can be a valuable asset in trademark litigation.

Some of the cases relied decisively on surveys which would have been given no weight in another court, for example, compare Case X with Case XVII; therefore variances in reasoning between courts do exist. Even the same court may reach a different decision on basically the same facts, as evidenced by a comparison of Cases VIII and XVII, or may disregard the survey as a usurpation of its judicial function, as in Cases II and VIII.

DECISIONS GIVING LEAST WEIGHT TO SURVEY

Case	Marks & Goods or Services Involved	Method & Questions Employed in Survey	No. Interviewed Who Responded	Percent Indicating Confusion	Decision of Court	Weight Afforded Survey by Court
I-Lever Bros. Co. v. Butler Mfg. Co., 111 F. 2d 910, 45 USPQ 580 (C.C.P.A. 1940).	LUX for toilet soap and detergent v. LUSTRLUX for dry-cleaning apparatus.	An advertisement describing appellee's machine was sent to 500 housewives located in 10 different cities. It described the use of the apparatus for a dry-cleaning operation as the LUSTRLUX system and made reference to the solvent used as the LUSTRLUX solvent. A letter accompanying the advertisement asked for a reply to the following questions: 1. Does this advertisement make you think that this system of cleaning is sponsored by the maker of any product you know? (Please check) Yes <u> </u> No <u> </u> 2. (If the answer is Yes) What product do you think of as being connected with this system?	258	85% (Answered LUX soap)	No Confusion	NONE—The court stated that the issue was not whether the advertisement caused a few housewives to think that the system of cleaning was sponsored by the manufacturer of LUX soaps, but rather whether a trademark use by appellee of term LUSTRLUX on its dry-cleaning apparatus would be likely to cause the purchasing public to believe that appellee's dry-cleaning apparatus and appellant's LUX soap had the same origin.
II-The Procter & Gamble Co. v. Sweets Laboratories, Inc., 53 USPQ 67 (Com'r 1942), <i>aff'd</i> , 137 F. 2d 365, 58 USPQ 11 (C.C. P.A. 1943).	IVORY for soap v. IVORYNE PER-OXIDE GUM for chewing gum for whitening teeth.	The questions are not stated in the opinion, but in general, it consisted of a poll of housewives, taken verbally, and sought to ascertain who was the manufacturer of applicant's product.	60	50%	No Confusion	NONE—The court was of the opinion that the goods involved were so dissimilar, regardless of what the poll showed.
III-Coca-Cola Co. v. Victor Syrup	COCA-COLA for soft drinks v. NU-	Two investigators visited 200 establishments where soft drinks	200	47% failed to make	No Confusion	NONE—Since there was no way to distinguish

Corp., 97 USPQ 478 (Com'r 1953), <i>aff'd</i> , 218 F. 2d 596, 104 USPQ 275 (C.C. P.A. 1955).	TRI-COLA for soft drinks.	were sold; 100 soda fountains and 100 bars and taverns. One investigator asked for NUTRI-COLA and the other asked for COCA-COLA.	100	any distinction served from the same tap.		whether the persons serving the drinks misunderstood what was asked for or whether a deliberate substitution was made.
IV-Sears Roebuck & Co. v. All States Life Insurance Co., 246 F. 2d 161, 114 USPQ 19 (5th Cir. 1957).	ALLSTATE for auto batteries, tires, and accessories and auto insurance v. ALL STATES LIFE INSURANCE CO. for selling life insurance.	Ten interviewers propounded the following questions to impartially selected telephone subscribers: 1. What comes to your mind when I say the brand name WEST-INGHOUSE? 2. What does the brand KODAK mean to you? 3. What does ALLSTATE mean to you? 4. If you wanted ALLSTATE insurance where would you go? 5. Have you ever heard of ALL STATES INSURANCE CO.? 6. Who would you say owns ALL STATES LIFE INSURANCE CO.?	Not Stated	No Confusion		NONE—Because it contains self-serving statements. It does not fairly represent the name ALL STATES INSURANCE CO. until two questions are asked which if correctly and properly answered call to mind Sears, Roebuck & Co. The court was also of the opinion that it was not fair for one party to propound questions with no opportunity given to the other party to test the answers.
V-The Seven-Up Co. v. Feigenson Bros. Co., 123 USPQ 89 (T.T. A.B. 1959).	7-UP for soft drinks v. UP-TOWN for soft drinks.	The following question was propounded to interviewees: Did it ever occur to you that UP-TOWN and 7-UP could be put out by the same company?	Not Stated	More than 3000	No Confusion	NONE—Since the question actually associated the two marks and did not reflect the state of mind of the person interviewed in the same manner as if the products had been encountered in an unassociated manner in the marketplace.

DECISIONS GIVING LEAST WEIGHT TO SURVEY—CONTINUED

Case	Marks & Goods or Services Involved	Method & Questions Employed in Survey	No. Interviewed Who Responded	Percent Indicating Confusion	Decision of Court	Weight Afforded Survey by Court
VI—Huntington Mattress Co. v. Celanese Corp. of America, 127 USPQ 428 (T.T. A.B. 1960), modified 128 USPQ 99 (T.T.A.B. 1961).	Family of CLOUD marks for mattresses v. CELLACLOUD for fibrous filling material for use in mattresses.	A letter was sent to a selected group familiar with the opposer's products, and propounded the following question: Who is the manufacturer of the new CELLACLOUD mattress?	84	74%	No Confusion	NONE—There was nothing in the record to suggest that interviewees would associate a CELLACLOUD mattress or one with applicant's CELLACLOUD fiber with opposer had they first encountered it in the marketplace. The questionnaire was sent to persons familiar with opposer's CLOUD products.
VII—S. E. Mighton Co. v. La Pryor Milling Co., 274 F. 2d 676, 124 USPQ 376 (C.C. P.A. 1960).	DOGGIE DINNER for dogfood v. DOG-E-DITE for a vitamin and mineral supplement preparation for dogs.	Not Stated	Eight testified	100%	Confusion	NONE—The court found nothing in the record as to how many persons were interviewed, or why only eight were selected to testify. Furthermore, there was no evidence to indicate that those who did testify were typical of potential purchasers, nor was there any testimony as to what transpired at the interviews. Nevertheless, the court found confusion to be likely because of the similarity between the goods and products.

VIII-Miles Laboratories, Inc. v. Frolich, 195 F. Supp. 256, 130 USPQ 18 (S.D. Calif., 1961), <i>aff'd</i> , 296 F. 2d 740, 132 USPQ 122 (9th Cir. 1961).	ALKA-SELTZER for anti-acid effervescent preparation v. MILK-O-SELTZER for anti-acid effervescent preparation.	Trained interviewers stopped people on the street, in stores, etc., and showed them a bottle of MILK-O-SELTZER and asked: What other brand name do you think this company uses? A professor of psychology testified that the testing and sampling were reasonable and fair.	Not Stated	Not Stated	No Confusion	SOME, BUT NOT CONCLUSIVE—The court stated that trademark litigation does not consist of a word association game, but rather, a balancing consideration of the desirability of preventing confusion and the unfettered use of the English language. The latter must give way when <i>the court</i> decides there is a likelihood of confusion.
IX-Wembley, Inc. v. Diplomat The Co., 216 F. Supp. 565, 137 USPQ 107 (D. Md. 1963).	COLORGUIDE; THE TIE WITH THE COLOR GUIDE for neckties v. FASHION WITH THE TIE GUIDE for neckties.	Shoppers were sent to various stores and asked to see a COLORGUIDE tie. If they were asked what they meant, the shoppers were instructed to say they had seen it on TV and in leading magazines.	Not Stated	Not Stated	No Confusion	SLIGHT—Since inquiries were directed to sales personnel, rather than prospective purchasers. Sales personnel are usually aware of differences. Further, there was no evidence that the stores selected were a random sample.
X-National Biscuit Co. v. Princeton Mining Co., Inc., 137 USPQ 250 (T.T.A.B. 1963), <i>aff'd</i> , 338 F. 2d 1022, 143 USPQ 422 (C.C. P.A. 1964).	PREMIUM for biscuits v. PREMIUM POP for raw popcorn.	This survey was conducted by two college students, who were not told its purpose, nor for whom the survey was being conducted. The following questions were asked orally: 1. If you saw PREMIUM POP used as a trademark for popcorn what company would you think put it out? 2. What makes you think so? 3. Please name any other product that you think is put out by the same concern.	500	31.8%	No Confusion	NONE—Question 1 immediately calls for an association of PREMIUM POP with some other product having a similar mark with which the interviewee is familiar. Also, the court stated that it is not truly illustrative of what the public thinks to permit one party to propound questions chosen on its behalf, however fairly attempted, with no opportunity given to the other party to test the answers given.

DECISIONS GIVING LEAST WEIGHT TO SURVEY—CONTINUED

Case	Marks & Goods or Services Involved	Method & Questions Employed in Survey	No. Interviewed Who Responded	Percent Indicating Confusion	Decision of Court	Weight Afforded Survey by Court
XI—General Motors Corp. v. Cadillac Marine & Boat Co., 226 F. Supp. 716, 140 USPQ 447 (W. D. Mich. 1964).	CADILLAC for automobiles v. CADILLAC for boats.	The survey consisted of showing the person being polled a copy of an advertisement for CADILLAC boats and asking him the following two questions: 1. Who do you think put out the boats shown on the opposite page? 2. Will you please name anything else that you think is put out by the same concern?	150	22%	No Confusion	NONE—Since the individuals questioned were not purchasers of boats; many, in fact, indicated no interest in them.
XII—Esquire Sportswear Mfg. Co. v. Genesco Inc., 141 USPQ 400 (T.T.A.B. 1964).	SLEEX for slacks v. SLEEX for girdles and brassieres.	Opposer sent a letter and questionnaire to customers throughout the United States. In the letter, opposer advised each person that it was legally contesting the right of the applicant to use SLEEX and asked their help. The following questions were propounded: 1. What would be your reaction to the slacks sold under the name SLEEX, if you heard that garments such as girdles for women were also being sold under the identical name? 2. Do you think, as a merchant, that your male customers would refuse to purchase slacks bearing the trademark SLEEX, if they knew that girdles for women were being sold under	1500	Not Stated	No Confusion	NONE—Since the survey was devoid of objectivity, because of the cover letter. At best, moreover, the answers constitute opinion evidence, and insofar as the retailers attempt to reflect the opinions of their customers, this would constitute hearsay.

					3. Would it be your opinion that use of the name SLEX upon girdles for women would impart a derogatory effect to slacks sold under the identical trademark for men so that men would not buy the slacks merchandised under that name?
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DECISIONS GIVING CONSIDERABLE WEIGHT TO SURVEY

XIII-International Milling Co. v. Robin Hood Popcorn Co., Inc., 110 USPQ 368 (Com'r 1956).	ROBIN HOOD for farina, rolled oats, oatmeal and wheat flour v. ROBIN HOOD for buttered popcorn.	This poll of householders selected on a random basis to represent a cross-section of the populace was conducted by a professor of psychology. There was a spot-check verification of the answers received. The interviewers were not told who their employers were, nor the results that were expected. The poll was properly introduced into evidence by the professor, the verifiers and the interviewers, who were subject to cross examination. Each interviewer was supplied with six labels of various products including ROBIN HOOD brand popcorn, with the name of the manufacturer removed. The following questions were asked: 1. What is the name of the company that makes (label shown)? 2. Have you or any members of your family bought (label shown)? 3. If yes, who bought it? 4. If you can think of any other products put out by each of these companies, please name them. (Labels shown again).	512	61.5% associated the makers of ROBIN HOOD popcorn with a milling company in answer to question 4.	Confusion	BINDING—Since the court felt that some feeling of association between ROBIN HOOD popcorn and ROBIN HOOD flour had been shown.
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DECISIONS GIVING CONSIDERABLE WEIGHT TO SURVEY—CONTINUED

Case	Marks & Goods or Services Involved	Method & Questions Employed in Survey	No. Interviewed Who Responded	Percent Indicating Confusion	Decision of Court	Weight Afforded Survey by Court
XIV—Standard Oil Co. v. Standard Oil Co., 141 F. Supp. 876, 110 USPQ 122 (D. Wyo. 1956), <i>aff'd</i> , 252 F. 2d 65, 116 USPQ 176. (10th Cir. 1958).	S. O., SOCO, SOLITE, STANDARD for oil products v. SOHIO for oil products.	Individuals, who were not told purpose of survey were placed at gasoline stations and asked ordinary and casual purchasers of gasoline the following: What does the word SOHIO mean to you?	Not Stated	Substantial percentage answered the Standard Oil Co.	Confusion	CONSIDERABLE
XV—Grove Laboratories, Inc. v. Approved Pharmaceutical Corp., 149 F. Supp. 86, 112 USPQ 287 (N. D.N.Y. 1957).	4-WAY for cold remedy v. 7-WAY for cold remedy.	Interviewees were shown the defendant's product and were asked their reaction.	Not Stated	Not stated, but a majority indicated some association with 4-WAY.	Confusion	BINDING
XVI—The Seven-Up Co., v. Green Mill Beverage Co., 191 F. Supp. 32, 128 USPQ 284 (N. D.Ill. 1961).	7-UP for soft drinks v. FIZZ UP for soft drinks.	Plaintiff conducted an interview test with persons who passed a display of FIZZ UP bottles in a supermarket, to ascertain origin of products displayed under defendant's mark. The persons interviewed were varied as to age, sex, locality and economic status. The interviews were recorded by hidden movie cameras.	Approximately 1000	Not fewer than 25%	Confusion	BINDING

<p>XVII-Sperry Rand Corp. v. Seawol Distributors, Inc., 140 USPQ 532 (S. D. Calif. 1964).</p>	<p>REMINGTON for office machines and electric razors v. REMINGTON for sewing machines.</p>	<p>Persons interviewed were shown a marker bearing the word REMINGTON as used on sewing machines and were asked:</p> <ol style="list-style-type: none"> 1. If you saw the name REMINGTON displayed on a sewing machine as shown here, what company would you think put it out? 2. What makes you think so? 3. Please name any other products put out by the same concern or any other well known brands or trademarks used by it. 	<p>500</p>	<p>90.4%</p>	<p>Confusion</p>	<p>Strong confirmation of the independent judgment of the court.</p>
<p>XVIII-La Maur, Inc. v. Revlon, Inc., 245 F. Supp. 839, 146 USPQ 654 (D. Minn. 1965).</p>	<p>STYLE for hair-spray v. STYLE & SET for hairspray and setting lotion.</p>	<p>The poll was conducted in four supermarkets carrying both products. The interviewer would stop a person in the store, at a location remote from the cosmetics counter, and show a can of STYLE and a can of STYLE & SET side by side. He would ask whether the interviewee thought the products were made by the same or different companies.</p>	<p>Not Stated</p>	<p>Overwhelming majority indicated that the products were made by the same company.</p>	<p>Confusion</p>	<p>RELIED STRONGLY</p>

Nevertheless, taking inconsistencies and independence in judicial opinions as facts of life, a careful consideration of the summary of each case studied suggests that if care and impartiality are maintained in selecting the question propounded and the method employed in conducting the survey, the chances of acceptance over and beyond the hypothetical 33 percent can be enhanced.

As far as the method of conducting the survey is concerned, the litigant offering the survey should be prepared to show that it was conducted by an impartial, skilled expert in such matters, such as a psychologist. The person interviewed should be impartial and selected on a random basis. The sample selected should represent a cross-section of the typical purchaser of the goods and as far as applicable, should be varied as to sex, age, educational background and economic status. Verification of answers should be given in open court. The opportunity to participate and test the answers received in the survey should also be given to the opposing party.

In so far as the actual questions are concerned, care must be exercised in their phrasing so as not to prejudice unfairly the response in favor of the party offering the survey.

Questions which refer to the opponent's mark in connection with goods or services not sold or rendered under the mark will be discounted. Care must also be exercised not to convey to the person interviewed the mark of the party conducting the survey, since an immediate association with the opposing party's mark or goods is inevitable. One technique used to avoid this objection is to ask the question concerning the opponent's mark as a sequel to similar questions concerning extraneous marks, rather than prejudicing the mind of the interviewee by prefacing the ultimate question with a question identifying the mark of the party conducting the survey. Finally, the question should be phrased so that the answer cannot be ambiguous and susceptible of a variety of interpretations by both the party conducting the interview and the court.

In the Appendix which follows, a checklist has been prepared which takes into consideration the main contentions of rejection and acceptance, as advanced by the courts, of the surveys introduced in the cases analyzed above. While the list is undoubtedly far from being all-inclusive, it is meant merely as a guide for future trademark litigants who will consider using the survey tactic to present evidence of actual confusion.

APPENDIX

- A. Are there proper controls on the method used in conducting the survey in order to demonstrate to the court that the answers were impartially solicited and recorded?
 1. —by motion pictures showing the interview and the manner in which it was conducted? (Case XVI)
 2. —by testimony of the poll-taker as to what transpired at the interview? (Case VII)
 3. —by expert testimony that the poll was supervised and conducted in accordance with accepted methods of psychology and that the answers were screened in accordance therewith? (Case XIII)
 4. —by verification of the answers?
 - (a) —in open court by the person interviewed? (Case XIII)
 - (b) —by a spot check by a disinterested party? (Case XIII)
 5. —by selecting interviewees at random? (Case IX)
 - (a) —who were not customers of the party conducting the poll? (Cases VI, XII)
 - (b) —who are typical of potential purchasers of the product? (Cases VII, IX, XI)
 - (c) —who are varied as to age, sex, and economic status as far as applicable? (Case XVI)
 - (d) —who were not told the purpose of the survey? (Case XII)
 - (e) —who are not only part of the total group interviewed which answered most favorably for the position of the party conducting the survey? (Case VII)
 6. —by permitting the opponent an opportunity to test the answers? (Cases IV, X)
- B. Does the form of the question selected for use in the survey prejudice the response?
 1. —by referring to use of the mark in connection with goods or services not sold or rendered by the opponent? (Case I)
 2. —by laying an improper foundation for the response?
 - (a) —by conveying to the person interviewed the product or mark of the party conducting the survey? (Cases IV, X, compared with Case XIII)
 - (b) —by associating the two marks in the question? (Case V, compared with Case XIII)
 3. —by making it possible to give an answer susceptible of a variety of interpretations? (Case III)

Foreign Investment and Technical Agreements in Yugoslavia—1967

HERSCHEL F. CLESNER*

SUMMARY

YUGOSLAVIA IS A NATION OF ABOUT 20 MILLION PEOPLE which has, in recent years, made strides in moving from a very largely agrarian economy to one that is partially industrialized. It has accepted the ideology of the "good life"—the car, the home, recreation and consumer services. It is a country which received more than \$2.5 billion in American foreign aid but which appears to have made greater strides when forced to undertake hard doses of self help. The economy no longer operates under a state central planning and management system. Economic isolation from the Western world is a policy of the past. The present direction is toward a socialist-capitalist economic mix that is not unlike many of the nations of the Western world. In proceeding with domestic decentralization, full convertibility of their currency, tariff reduction, competition with foreign industry, profit and/or production-sharing with foreign companies, the Yugoslavs have, indeed, gone up new roads for a "Communist" country.

The Yugoslav changes have sufficient attraction that United States companies, seeking to establish European subsidiaries in order to market aggressively in Europe, would be interested in investigating the present opportunities. The changes have lifted many obstacles to economic ties. There is an abundant source of manpower, both skilled

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and unskilled—in contrast to the present scarcity in Western Europe. Wages run below Western levels. The recent economic and investment developments taken together with the dilution of emphasis on ideology increase the possibility of Yugoslav firms entering into business partnerships with Western companies.

Such cooperation is no longer absurd or ideologically abhorrent to pragmatic “Communist” leaders who approach the problem. “Pepsi” is bottled and distributed in Yugoslavia as the result of such a cooperative partnership. One may thus witness the sale for profit of American “Coke”¹ in a “Communist” country. There is a desire by part of the Yugoslav leadership to experiment with Western practices that get results providing the symbolism and semantics of Communism are preserved. The result is that the differences between Western and Yugoslav methods of doing business have narrowed. The Yugoslavs recognize and respect foreign owned patents and trademarks. They are willing to pay in some form, arrangement or deal for their use. In turn they desire to exploit their innovations in foreign markets through mixed ventures, licensing or profit-sharing deals. At present business relationships between Yugoslav firms and Western companies are very possible whereas only a short time back they were impossible.

The role of licenses, patents, trademarks, technical know-how and assistance are very significant in any arrangement that Yugoslav firms will enter into—whether it is a so-called franchise, license, coproduction mixed venture or profit-sharing deals because of their need to obtain something they couldn’t otherwise obtain. In dealing with the Yugoslav world the Western executive should realize that his counterpart is only now acquiring a business sense as to marketing and contract negotiations, as he was denied this opportunity under the former operating system. The Westerner should recognize that the individual on the other side of the table is also puzzled as to just how far his changing but still government-controlled world will permit him to negotiate. Yet—“While waiting for more evidence to be assembled on the multi-faceted and varied ramifications of East-West deals, we would suggest . . . you can do business there ‘only by really trying.’”² The fog surrounding trade with Yugoslavia still exists but is gradually clearing. Recent Yugoslav reforms should aid trade relations. In turn the other Eastern European countries could emulate the Yugoslavs and so further facilitate commercial transactions between East and West.

¹ A former so-called symbol of capitalism (now more commonly called “Imperialism”) as profounded by Communist propaganda.

² Christopher Bird and Herschel F. Clesner, “Letter from the East,” *IDEA*, Vol. 9, No. 4 (Winter 1965-1966).

INTRODUCTION

THE UNORTHODOX "COMMUNIST" POLICIES OF YUGOSLAVIA are again under attack from writers such as Mihajlov on one side, and on the other, the major Soviet Communist Party organ *Pravda*. In answer to the *Pravda* criticism that the Yugoslav Communist Party had renounced its role in government entirely as a result of the Yugoslav reforms, President Tito announced "We are seeking new roads which suit us in order to go faster ahead. . . . This is what some countries cannot or do not want to understand."³

On March 15, 1967 the Yugoslav government legalized the proposition that foreign investment, to be compensated by sharing of profits, will be allowed. This order is directly pertinent to this discussion. The other changes paint the environment in which the transactions will be conducted.

In April 1967 in the strongest move toward decentralization by any "Communist" nation, Yugoslavia's Federal Assembly passed a constitutional amendment limiting the federal government's activities to foreign policy, defense and general supervision of the economy. The action became effective April 23, 1967 after the national elections. The number of federal ministries was cut from 13 to six and up to one-third of the jobs of the federal government's employees were eliminated. The positions of vice president and deputy commander of the armed forces were reorganized out. This was the second constitutional amendment strengthening the six regional republics' governments at the expense of the federal government.

These actions have been further enhanced:⁴ On April 14, 1967 the Yugoslav Communist Party announced that it had prepared a procedure for giving up its role in national life. The outline calls for the Party's separation from the state, democratizing of the Party structure to achieve a guiding ideological position in the nation in contrast to the all-powerful governing force of traditional Communist practice. The Central Committee of the Yugoslav Communist Party

³ *Herald Tribune—Washington Post International* (Paris), March 31, 1967.

⁴ The Yugoslav Federal Assembly passed new reforms on May 11, 1967 giving greater jurisdiction to the Federal Assembly, starting with the initiating of bills in the entire Yugoslav legislative process. Previously this initiative came essentially from the federal government (the Party) or from the federal administrative units. The orders set forth the government's responsibility to the Assembly, method of government's resignation, the process of votes of confidence, the referral of bills to the assemblies of the republics for their comments, the right of every deputy to use in the assembly the tongue of the group to which he belongs. *Tanyug* (Yugoslav) *International News Service*, May 11, 1967; *Nerald Tribune—Washington Post International* (Paris), May 12, 1967.

has since endorsed the program. The withering away of totalitarian rule is implicit in the words of the Yugoslav Communist's program. The measure of its intent and success only time will tell.

The steps taken are decisive efforts toward satisfying internal pressure and appetite for change. The activists, aspiring leaders, dissidents, industrialists and the rank and file of the Party demand a voice rather than being continually dictated to by the Politburo-Presidium. The end product of the present measures is not democracy. The Party still demands discipline and intends to play the decisive dominant role. The state is still a Party monopoly but some opposition and criticism within the Party is allowable.

If the Yugoslav reforms, (Party, governmental or economic) prove successful they could lead to the initiating of similar steps in other Communist countries which have in recent years adopted many of the innovations first tried out by the Yugoslavs. They have led the pack by defying Stalin and the system; the ensuing necessity to survive moved them out into the world away from economic isolation. The other Eastern European countries noted Yugoslavia's experience. They have not followed Yugoslavia's lead out of admiration, but out of sheer need. The best examples are their renunciation of economic isolation (autarchy) and acceptance of the need for economic reform. As with Stalingrad, autarchy has disappeared from the Communist map. Economic reform and profit are now the common theme of discussions in the Communist world. They are major agenda items at CEMA (Council for Mutual Economic Affairs)⁵ meetings. When the Yugoslavs first acted, their economic formulations were branded by the other Communist countries as impractical, heresy and ideologically unimaginable. But the others have now moved in the same direction as the economic reforms work.

TOWARD THE "GOOD LIFE"

Are these changes the fruit that a tolerant Western policy over the past 10 years toward a "Communist" nation is reaping?

Yugoslavia has been a catalyst in breaking up the monolithic "Communist" world. It successfully reinitiated the age-old thesis of "My Country First." At present the country needs hard currency and desires a favorable balance of payments to accelerate its developmental program. As an independent "Communist" state it has been in a race

⁵ Also referred to in the West as COMECON (Communist Economic Council) or the "Communist" response to the European Economic Community.

to outachieve the Eastern European "Communist" states. Its efforts have not been lost on the other nations of the Danube Basin as indicated by their ferment. Through increased tourism, exports, and other means it hopes to generate the necessary hard cash to promote the "good life." To do so, Yugoslavia must provide the necessary tourist services plus the export production and marketing capability. It seeks foreign investment on a case-by-case basis to obtain that which the country couldn't obtain any other way. The investment may consist of financial resources, equipment, raw products, technical management and assistance, bookings, licenses, patents, trademarks and engineering knowhow. The investment return will be a share of the profits.

THE ECONOMY: STATE MONOPOLY OR PRIVATE ENTERPRISE?

To many, the allowance of foreign investment in domestic companies and profit-sharing with foreigners may seem odd for a "Communist" state, especially to those individuals whose conception of a Communist state evolves from a text book study of Marx or a course based on the economic isolation of Stalin's Russia and controlled satellite nations. In the case of present-day Yugoslavia, however, its economy has gravitated to a stage that is part socialist and part private enterprise. In many ways it is a mix that is similar to the economies of the Scandinavian countries, India, Austria, Israel, Mexico and other nations of the West. Profit is no longer a dirty word. It now possesses a mark of respect as a success indicator and an investment guide. Emphasis is directed to improving industrial production by means of economic stimuli rather than by administrative methods of the former statist central planning and management system.

Yugoslavia has been moving rapidly away from central planning and controls as most factories and enterprises are now self managed. Factories make cars, scooters, electrical appliances and other items under license from foreign concerns. Items are marketed under the foreign licensor's trademark. Factories and enterprises are owned by the state and are theoretically operated by the workers through the workers' council. Labor has the right to strike and has, in several instances, exercised it. Foreign trade is no longer a government monopoly. The enterprise may buy, sell or trade directly from or with foreigners rather than through state trading agencies. The goal is that each factory or enterprise will stand on its own feet—competitively and profitably. The state plans to cut back tariffs to force its industries to be competitive in its domestic market with foreign companies.

Most of the farms (approximately 85 percent of the arable land)

and many small businesses in Yugoslavia are in private hands. The private ownership percentage of arable land is believed to be as large as in pre-war (World War II) Yugoslavia. Land on the Dalmatian coast on which to build villas is sold to foreign movie stars. Barber shops, boarding houses, boat rentals, restaurants, taxis, tailor shops, and produce stands number among the more than 115,000 privately owned enterprises which may employ up to five persons. Peasants may sell products derived from private holdings and are technically allowed to import foreign equipment, such as tractors, to work them. Yugoslav banks will provide credit to further the development of enterprising efforts. Foreign movies have been filmed on location in Yugoslavia, and the Yugoslav army has participated as extras. Throughout, Yugoslav ideologists still insist they are the truest disciples and interpreters of Marx—a theme with which Mao-tse-tung and his Red Guard certainly could not keep faith.

FISCAL RESPONSIBILITY AND CONVERTIBLE CURRENCY

To aid in its search for new roads to travel, foreign advice is sought concerning fiscal affairs. Yugoslavia is a member of both the International Monetary Fund and the World Bank. Banking is organized on conventional commercial lines. Interest rates in savings run up to 7 percent. Installment buying is practiced by the average citizen. Yugoslavia has become a full participating member of the General Agreement for Tariffs and Trade, more commonly referred to as GATT. It has made the necessary fiscal and tariff reforms to comply. The reforms were necessary as the economy was in dire straits. Drastic surgery and change were recommended. Accordingly the reforms were coupled with the novel industrial and management approaches undertaken by a "Communist" state.

Starting in July 1965 the government devalued the dinar by approximately two-fifths, tightened credit, withdrew some government subsidies for industry and commenced to phase out unprofitable and inefficient factories. The Yugoslav National Bank has entered into trade and payments arrangements with the major financial institutions of the world's trading nations. The banks will accept foreign funds for investment purposes. They now guarantee or insure export sales and provide export credits. Yugoslavia recently became the first "Communist" country to settle its outstanding dollar bond debt in full by agreeing to repay American investors an estimated \$20 to \$30 million of bonds that have been in default. The bond issues involved were made by pre-"Communist" Yugoslavia between 1922 and 1936 and

were defaulted in 1941. The sum total of all these steps adds up to greater goodwill and confidence in the fiscal responsibility of the Yugoslavs. The eventual goal is full convertibility of the dinar in world markets which would allow Yugoslav producers to sell and buy at the best competitive prices. It would assure foreigners of payment in hard currency upon receipt of dinars. The overall action is toward domestic decentralization, efficiency, increased labor productivity, modernization, profitability and doing business in conventional ways.

However, not everybody is happy with the trend. There is no status quo. The former guidelines have evaporated. Greater unemployment exists. Tranquility has disappeared. Pragmatism rather than ideology governs and there are rude awakenings. The federal government's authority in specific areas has been cut back. Some jobs within the federal government have been abolished. Plant managers must now deal with costs and price. Party-status bureaucrats (managers) must now presumably produce, and plants built for political rather than economic reasons cannot survive. Many unprofitable units have been cut back. To play in this ball park will require practical business sense and not a pseudo-managerial approach.

In contrast some intellectuals feel that the changes are not sufficient, promises without deeds. Local nationalism continues to raise its head. These factors could lead to economic disruption. Thus some changes may not come about and others may be a long time in coming. Yugoslavia, still, has a rough row to hoe to achieve a viable and progressive 1967 economy. The present self help measures are productive steps in contrast to the use of much of the more than \$2.5 billion of U.S. aid granted to Yugoslavia which allowed financial resources to be used for nonviable—or more of same—economic purpose.

TOURISM AND MANAGEMENT ASSISTANCE AGREEMENTS

The Yugoslavs badly need managerial assistance (know-why) whether in providing the various services necessary to accommodate tourists or in producing and marketing products. To obtain help and expedite results knowledgeable foreigners are brought into the country to assist in exploiting the tourist field. The foreign organization contributes finances, construction aid, equipment, technical and management expertise, franchise, bookings or other services. As Yugoslavia could not pay in hard currency for all such needs and could not allow foreign ownership, other arrangements had to be devised. For example, Inter-Continental Hotels, a subsidiary of Pan-American World Airways has in effect been managing a hotel, the Esplanade, in Zagreb

for the past few years under a profit-sharing arrangement. Inter-Continental provides technical and management assistance, acts as the hotel's agent abroad for reservations and receives payment in hard currency generated by the operation.

Volkswagen entered into a technical assistance pact relating to a million dollar sales and service center built for the Yugoslavs in Belgrade. Pepsi is available for those tourists and others who desire it, as Centroprom, the Yugoslav food and beverage agency, has obtained a franchise. Pepsi, obviously, supplies Centroprom with formulation, technical and other aid as it does with any franchise dealer. Hertz International Ltd. provides rental car service through a state agency, Kompas, under a profit-sharing deal. There are gambling casinos on the Adriatic coast operated by Italians for foreigners only—for a 40 percent share of the profits. Las Vegas would classify such operations as private free enterprise and Marx, Stalin or Castro would have great difficulty rationalizing the latter operations as within their ideology.

The Yugoslavs are taking large steps to increase their travel business. Eighty million dollars were received from this source in 1964. They hoped to obtain \$150 million from this source in 1966 and expect \$500 million of such income to flow into their coffers in 1970. Of this inflow about 85 percent is hard currency. With the convertible currency they purchase modern technology, know-how, know-why and other services. Recent governmental decisions will lead to the introduction of more tourist facilities such as hotels, motels, gasoline stations, entertainment, and roadside restaurants for foreign tourists. And, of course, all of this leads to new and improved highways. Tourism fosters change and creates a whole chain of interlocking needs for proper operation. It would not be surprising if Italian, West German, or United States firms built the hotels, motels, gasoline stations and restaurants.

Lloyd-Pacific of the United States, Neckermann of West Germany and others are involved in pursuit of this business. Each case is carefully considered, as the arrangement must have government clearance and approval. Title to reality, or the marketing and distribution company, will remain in Yugoslav hands but the foreign investor will receive a share of the gross income or profits in return for technical, management and other services. The arrangements differ to some degree from deal to deal. With each negotiation, the Yugoslavs gain experience and the numerous tourism and related arrangements become the working model for foreign industrial investment deals.

Technical assistance and know-how, finances, and other investment items are common denominators to industrial as well as to tourism ventures.

All these changes can only be welcomed by Americans, for, as it becomes more consumer-minded as to services and goods the "Communist" state becomes more "Westernized." To facilitate freer movement, to further stimulate trade and tourism the government will ask the Yugoslav Federal Assembly to enact legislation to allow Yugoslavs to go abroad without tourist visas to all countries which entered into agreements on the mutual abolition of visas with Yugoslavia. The Yugoslavs have entered into 20 such treaties. A few years back the practice was unheard of in Europe, let alone the fact that a participant could be a Communist state. Besides such bilateral treaties, as 1967 is the international tourist year, Yugoslavia has unilaterally opened its doors to all foreigners during 1967 for three-day stays. They have extended this to a seven-day period and permit individuals to cross their borders merely on the submission of passenger manifests.⁶ The days of the border dispute concerning Trieste and Goritza plus the autarchic Iron Curtain period have come to an end. An open invitation exists to all tourists to spend their hard currency in Yugoslavia.

MIGRANT LABOR: HARD CURRENCY AND TECHNICAL TRAINING

More than 250,000 Yugoslav workers have been encouraged by the government and have found jobs in West Germany, France, Belgium, Sweden, Switzerland and other highly industrialized European countries which possess labor shortages. The government expects the migrant labor figure to reach 400,000 by the end of 1967. The greater number are employed in the specialized industries of France and West Germany. There are approximately 150,000 such workers in West Germany and 8,000 in Sweden. A great percentage of these workers remit much of their earnings to their families in Yugoslavia. They bring in needed hard currency and receive in most instances technical training in the "Western way" of doing things. In many instances the training is of a nature that is not provided at home, so such trained labor becomes a valuable asset to Yugoslavia.

LICENSING (FRANCHISE) ARRANGEMENTS

Though Yugoslavia has working relations and technical exchanges with CEMA countries, it desires to buy "West," as this is to buy the

⁶ *Tanyug International News Service*, May 13, 1967.

best. Very often the best is American. Thus, over 300 and possibly as many as 600 licensing and technical assistance deals have been entered into with western companies of which at least a small number are with United States corporations. The number involving United States companies may be greater if one could break out the number of licenses negotiated with licensees or with European subsidiaries of American concerns.

A licensing arrangement involves the use of an invention or product but in most cases it will also provide for know-how, technical documents, aid or training, and trademarks. Previously mentioned was that Pepsi-Cola is now produced and marketed in Yugoslavia under a franchise license. Pepsi and Coke are no longer "capitalist" exclusives, as Coke is sold in Bulgaria. A Yugoslav state agency is a Hertz U-Drive-It car rental franchise operator. An achievement yet to be obtained by No. 2—Avis.

The Yugoslavs manufacture Citroens and Fiats.⁷ The Crvena Zastava factory of Kragujec has made Fiats under its own product name for the past three to four years. The cars were made originally for the Yugoslav domestic market but they also proved to be valuable export items to Rumania and Bulgaria. The demand is such that Crvena Zastava is now negotiating with Fiat for the import of vehicle models 850, 1100 and 2300. The purchaser would pay for the car in dinars. The initial Fiat introduction into Eastern Europe has, in turn, stimulated the present automobile explosion in other "Communist" nations. Fiat has now arrangements with Bulgaria, Poland and the USSR. Rumania has turned to other Western European sources due to Fiat's overcommitment. The Yugoslavs and Bulgarians are attempting to develop a coproduction arrangement to make parts for Fiat model numbers 850 and 124. The people and the economies of all the "Communist" countries have become car-consumer conscious and they now expect to share in the fruits of car transportation and travel. They will also share in the problems as injuries, air pollution and accidents occur as night follows day. Vespa motor scooters are produced by a state facility under license from the Italian company for those who prefer this form of transportation. The Perkins engine is also made under a license.

The licensing arrangement may be a mixed operation. For example, the Prvomajska machine tool factory of Zagreb makes turret lathes based on the British "Modern 125" plans; the deal calls for the export

⁷ For example, model numbers 124 and 850.

sale of the Yugoslav manufactured item by the British in certain countries and in other countries by the Yugoslavs.

COPRODUCTION DEALS

Under the socialist constitutions of the "Communist" countries all production and distribution is owned by the state. Therefore each state has had difficulty in entering into joint ventures with foreigners, whether an enterprise of another Communist state or of the West. With effort they evolved the scheme of joint ventures, without any ownership title rights to the foreigner, but with the right to a share of the production proportioned to the capital investment of each party.

Yugoslavia especially has taken active steps to interest foreign companies to use Yugoslav facilities, personnel and capacity to assemble previously manufactured items or to process raw materials when the foreign company did not have the available facilities to meet market demand. Braun A.G. of Frankfurt joined with Lskra Company of Yugoslavia in a joint production scheme whereby electric shavers are made in Yugoslavia. The Rade Koncar factory of Zagreb has a \$30 million coproduction arrangement with the Castor Company of Turin to manufacture automatic washers.

The Belgrade foreign trade enterprise, Interexport, with Volkswagenwerk A.G. of Wolfsburg, West Germany has tentatively agreed to build a Volkswagen assembly plant at Split, Yugoslavia. The arrangement will be finalized if the parties are convinced it will be profitable and economically justified. The Yugoslavs have approved the project and Volkswagen officials confirm reports that the contract will be signed soon.⁸ The deal calls for the factory to be built within a year and a half from the date of the final agreement. At first the cars would only be assembled from West German manufactured parts, but Yugoslav car component manufacturers would be gradually integrated into the operation.

The output goal calls for 100 vehicles a day, about 75 passenger cars and the rest commercial vehicles with a large percentage slated for export. Initial production may be as low as two a day. Initially, Volkswagen does not consider it will have a capital investment in the project as the Yugoslavs will purchase the parts, assemble and sell them in Yugoslavia. Volkswagen will receive a fee for consultation, managerial and franchise services. On the Yugoslav domestic market

⁸ *Wall Street Journal*, May 16, 1967.

the Volkswagens would be sold for dinars.⁹ There now are about 12,000 Volkswagens in Yugoslavia. Many were purchased by Yugoslavs working in West Germany. The Yugoslavs have certainly joined the car rebellion and the other Eastern European states are in "hot pursuit" to obtain "wheels."

The venture would price Interexport, a foreign trade enterprise, which under the present reforms would lose its clients in the vehicle manufacturing business in competition with Crvena Zastava automobile factory.

The Yugoslav Association for Nuclear Equipment has had talks with a British concern relating to the possible delivery of a nuclear reactor to Yugoslavia with the inclusion of Yugoslav industrial participation in the construction of the plant.¹⁰

Many of the joint ventures contain elements of coproduction and licensing. Through the coproduction deal, much experience and know-how is acquired with patents, licenses, technical documentation, developments, plus marketing and distribution. In the latter area the Yugoslav education and business sense were neglected for many years due to backwardness and the economic isolation policy.

Yugoslav companies do enter into ownership ventures in countries which allow foreigners to own production or distribution units. For example Prvomajska machine tool factory of Zagreb has formed a joint company with a Swiss firm. The joint company assembles machine tool parts made by Prvomajska into machine tools at a plant near Zurich. The assembled machine tools are then marketed in third countries.

Thus the basic Yugoslav premise is that the rights and obligations of the deal are to be determined by the contract with the foreign participant, by the statutes of the domicile of the operation, and by the practices of the commercial trading society.

INVESTMENT REFORMS

The recent changes will not force a change in the Yugoslav constitu-

⁹ *Belgrade Domestic News Service*, March 11, 1967. There are two news releases over a period of several months relating to this pending contract. The stories are not necessarily conflicting and can be merged as above. The original release and contract design probably called for Volkswagen to receive "hard currency" payment through the marketing of Yugoslav assembled Volkswagens in third countries. Due to other factors, this may have been dropped rather than merged into the latest plan, the goal of which is a Yugoslav facility operating under license, purchasing West German-made parts and assembling a small number exclusively for the Yugoslav market.

¹⁰ *Belgrade Domestic News Service*, February 6, 1967.

tion which forbids private or foreign ownership of manufacturing or distribution facilities. For the present, foreign capital will not be able to set up its own units in Yugoslavia or to enter as co-owner into joint ownership title ventures with Yugoslav enterprises. However, the reforms go beyond the coproduction scheme as they will allow the foreign investor to share in the profits of the joint venture proportionate to the investment.

The Yugoslav pronouncement relating to the reforms is that it desires to modernize production and promote export possibilities through the aid of foreign investment. The investment is to go beyond the acquisition of financial resources for economic development and to provide something they didn't previously have. It is a considered judgment which seeks that the nation's overall, including industrial, progress should be in the forefront, if possible, of the world's technological advance. They now adhere firmly to the tenet that freer and broader economic relations with other Eastern or Western countries result in the beneficial exchange of knowledge and technical achievements. And, accordingly, their economy would benefit from relations with the industrial countries of the West or the East. The particular sectors of industry, besides tourist services, for which they seek foreign investment are in electrical equipment, electronic, motor, aluminum, and chemicals (petrochemical, synthetic fibers and plastics). United States companies have disclosed an interest in several of these areas, especially aluminum due to the availability of bauxite and the electric power to be generated by the Iron Gate Dam Hydroelectric Project. With the aid of foreign investment, know-how and foreign investor's marketing capability they further hope to penetrate foreign markets previously closed to them and to create a greater domestic market.

By foreign investment the government includes tangible or intangible items that have value, such as documentation, technical and management aid, engineering know-how, patents, licenses, trademarks, credit and finances. The value of investment by foreigners may not exceed the amount invested by the Yugoslav enterprise. It may not exceed 50 percent of the total capitalization and is limited also by the amount put into the project by the Yugoslavs. As a result the foreign investor will be permitted to recapture his capital investment and share in the profits according to the contract. The format appears to be somewhat similar to the existing Pan-Am Inter-Continental Hotels deal.

The volume of total foreign investment and the scope of the outflow of profits derived from such investments will be regulated by the

Yugoslav government in accordance with the country's payment capability and will be subject to provisions of its foreign currency regulations. The foreign hard currency resources to pay the foreign investors' share of the profits will come from the enterprise's export earnings. A state agency will determine and regulate the foreign investments as to amount, activity, purpose and whether it is desirable from the point of view of the nation's interest. The management of Yugoslav enterprises which sign such contractual arrangements with foreigners has to follow the Yugoslav rule of government with the management and administration of the joint operation in the hands of the Yugoslav workers' council. The foreign investor may render managerial and technical expertise plus the right to determine business programs and procedures jointly with the workers' council.

Sufficient talk, including statements by Tito, that Yugoslavia will look favorably on some foreign investment proposals, have led Western business officials, including several representing major United States companies, to investigate the possibilities.

The Yugoslavs also allow one of their enterprises to invest in another provided that the management of the joint resources would be run on an equal basis and that profits will be distributed in proportion to the investment. This, too, is an innovation.

Inter-Continental Corporation's experience, and licensing and co-production arrangements with Yugoslav enterprises are current indicators of operating under such a system in Yugoslavia. But the problems begin to resemble those involving dealings with "Western" nations, such as Japan and others, more than with the essentially "Communist" nations.

JAPANESE EXPERIENCE

The Japanese industrial pattern seems to follow guidelines surprisingly similar to the format desired by Yugoslavia. Japan restricts foreign investment in Japanese industry since World War II. A Japanese government agency (the Ministry of International Trade and Industry—MITI) aids in determining and regulating the foreign investment. It does not freely allow the United States or other foreign investors to set up wholly owned or even majority owned subsidiaries in Japan. MITI generally approves only those investments where the foreign investor could offer some patents, know-how or technical skills that Japan couldn't get any other way. Since World War II Japanese companies have entered into 3000 or more patent, know-how and marketing licensing agreements with U.S. companies.

MITI has authorized more than 300 joint ventures in certain

industries in which the Japanese enterprise holds at least a 50 percent interest. It is such ventures which account for the vast amount of the half billion dollars that American companies have invested in Japan since World War II.

In only a few instances have foreigners been allowed to establish a 100 percent owned subsidiary and then only if the investors agreed to leave their capital investment and resulting profits in Japan with the exception of royalty payments for patents and technical know-how. Later they were allowed to recover a percentage of the subsidiary's profit. The Japanese restrict to 15 percent the amount of stock interest that a foreign entity may acquire in an operating Japanese firm.¹¹ So the foreign investor does not obtain much say in the operation of any Japanese based manufacturing company as control is in the hands of Japanese management. The Japanese assert that they do not desire wholly owned and operating U.S. subsidiaries because chaos for their smaller enterprises and distribution system would follow if U.S. companies were allowed to enter with their marketing techniques and know-how. In Yugoslavia the domestic manufacturing and distribution systems are in government hands.

Of late many U.S. and other foreign companies are becoming increasingly reluctant to part with the technology without some equity interest—some form of control—of the Japanese companies that will be using the patent rights, know-how, data and techniques. The same feeling may carry over to dealings with Yugoslav enterprises. However, the Japanese with Yugoslav enterprises. However, the Japanese experience indicates that some degree of flexibility and opportunity could be applied in achieving similar arrangements with the Yugoslavs. Thus the investment and licensing experience acquired by the United States and other foreign companies in dealing with such countries as Japan, Mexico, India, Sweden would be helpful as practical knowledge in the encounter with the Yugoslavs.

Belgium and Austria are on the rise. Last year more than 400,000

OUTLOOK FOR THE FUTURE

Presently Yugoslavia's main trading partner is Italy, followed by the Soviet Union, West Germany and East Germany. Exchanges with

¹¹ The Japanese recently have made some changes, none of which substantively affect the above conclusions. MITI now lists seven industries in which assets and business in Japan may be wholly owned by non-Japanese capital, such as motor cycles and rayon where Japan dominates world markets. MITI also presently lists 13 industries in which outside stock ownership, up to 50%, will be allowed. *Wall Street Journal*, May 31, 1967, p. 3.

Austrians visited Yugoslavia. The Austrians and Yugoslavs are negotiating matters concerning commodity exchange, industrial cooperation, mixed ventures, free port accommodation, internationalization of highways, and the use of power to be generated by the Iron Gate Hydroelectric Project.

Yugoslavia is a full member of GATT and an active participant in the Kennedy round to further reduce tariff barriers. However, the Yugoslavs haven't placed all their eggs in this one basket as they have been actively seeking arrangements with the European Common Market, EFTA (European Free Trade Association), and bilateral trading agreements. Yugoslavia has an arrangement with CEMA, (Council for Economic Mutual Assistance or the so-called Communist Common Market—COMECON). Belgium supports the Yugoslav request for an agreement with the Common Market. Austria supports their request for an EFTA agreement. If successful the Yugoslavs may achieve economic agreements with the trading blocs of Western Europe as well as Eastern Europe. Indeed, the Yugoslav tightrope act may result in a stronger bridge between the East and West particularly as it may concern Europe. The Yugoslav representations—which to them are a matter of economic necessity—have generated aroused interest in the operation of an economic alignment consisting of all the European nations—especially if the Kennedy round is a failure. In this direction, the Belgians joined the Yugoslavs and others in pushing for an appraisal of the activities of the United Nations Economic Commission for Europe. Thus, one cannot fully appraise the full potential of the Yugoslav market as there is no “book” answer as to future scope.

Because they no longer regard trade with the world market as a temporary phenomenon or as a necessary evil, they have shown a willingness to adapt many of the accepted practices of commercial investment and intercourse in use among the trading nations of the world. This pattern will accelerate with assistance from communication, labor and tourist interplay with Western European countries. The drive to become competitive in world trade and to achieve industrial efficiency at home has brought in its train significant changes in their commercial behavior and national economic system. In turn, the trading nations of the West, for their mutual advantage, conduct trade with Yugoslavia.

The policies of Yugoslavia will continue to be shaped by the exigencies of trade, the search for new ways to achieve a faster rate of economic progress, and the need to obtain technology, know-how and know-why, all of which are sparked by their constant desire to realize the “good life.”

FORUM

Although the primary purpose of *IDEA* is to communicate the research work of the Institute, it also serves as an educational vehicle for the exchange of informed opinion. The positions taken by the authors of papers and notes in this section are not necessarily those of the Institute. It is hoped that the material published in this section will stimulate researchers to undertake further study of the issues.

A Businessman Views the Report of the President's Commission

HELGE HOLST*

INTRODUCTION

AT THE OUTSET IT MUST BE STATED that I speak for myself only and have not been appointed or authorized to reflect the reactions of business as a whole. However, I can add that I have spoken with business friends and can report that their reactions are basically similar to my own. Accordingly, it is hoped that these reflections will

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provide insight into business evaluation of the Report of the President's Commission on the Patent System and the proposed changes which might be made to improve the system's usefulness to business and to our society. In doing so we believe they will also improve the contribution of the United States patent system to the development of the world.

REPORT TIMELY AND MEANINGFUL

From a business point of view we consider the report timely and meaningful. Patents, rights in them, and the availability of technological data, are all important to business and materially influence business activity. The report deals with this vast subject in a commendably compact manner. This treatment avoids obscuring the issues with copious detail. For this presentation, the Commission and the report are to be commended. So, too, we congratulate the Commission on its realistic and tangible recognition of the role of the employer and investor in furthering the work of the inventor. Only through their participation is the public benefitted by creative concepts. Without actual production of new and better goods and services resulting from the suggestions of inventors, little actual benefit would flow to users and to those who can be helped by the new and better ways of doing things. This requires the collaboration of manufacturer, advertiser and salesman. And without widespread use and enjoyment of his ideas, the inventor himself would derive little benefit from his inventions. The basic premises given on page 2 of the report are the clearest acknowledgment yet made in a public document of the role of the investor in the useful application of patents and of the necessity so to handle patent rights as to enlist this support in addition to protection of the inventor.

SCOPE RELEVANT AND USEFUL

Similarly business recognizes the necessity for the Commission to restrict its review and recommendations to a manageable scope and accepts the objectives outlined on page 3 of the report as a good selection. Many other aspects of the patent system and its application require attention: For example, the evolution of sound policy regarding the ownership and use of inventions resulting from government-sponsored research; the stimulation of inventors to invent; the

reduction of barriers to innovation in industry; the requirements to stimulate industry to modernize plant and tooling and thereby achieve economies of production and remain competitive in a world of free trade. But the Commission could not deal with all aspects of technological change and we accept the selection of areas chosen as relevant and useful, indeed commendable.

BUSINESS NEEDS CREATIVITY AND RELIES ON PATENTS

To succeed business must serve its customers well. To do so it must offer constantly improving products and services at reasonable cost. This requires that business continually develop better goods and services and methods and tools for producing them. Such efforts are costly in talent and resources. Any ordinary business—and especially a small business—has only limited resources of personnel, facilities and funds. It must therefore be selective in the projects it undertakes. This leads to the selection of those it considers most important. Likelihood of success, and the possibility of obtaining a proprietary position, weigh heavily in the choice. Only in such cases can business hope that its developments will not be immediately copied by its competitors—without the originator's development cost. Accordingly it is important to business to know if an area is already pre-empted by others or is available for exclusive development. The recommendations of the President's Commission on the Patent System appeal to business because they would promote early and adequate publication and thereby provide increased certainty and availability of information and of patent rights, while at the same time reducing the costs of obtaining such information and patent rights.

Now to comment on some of the specific recommendations of the report; it should be noted that these recommendations are closely interrelated or integrated.

Business Accepts the Principle of Granting Patents to the First Applicant to File on the Subject Matter

Recommendation I proposes that the United States adopt the principle of granting the patent to the first to file rather than the first to invent. While this is a departure from past United States practice—where the patent has been issued to the first to invent rather than the first to file—it appears to us that the overall public interest will be served by the proposed change. It must be noted, however, that an

additional change suggested would make prior public disclosure anywhere in the world a bar to the obtainment of a United States patent. We accept both the suggestions as beneficial because of the resulting pressure for early filing and adequate exposure.

Abolition of Interference Proceedings

Adoption of the principle of granting the patent on the basis of date of filing will eliminate or drastically curtail the heretofore lengthy "interference proceedings" between parties intended to establish earlier invention or reduction to practice. Business accepts this change of practice with relief since interference proceedings have been very time-consuming and expensive.

Patent Date Based on Preliminary Filing

Business likewise accepts as helpful Recommendation II which would permit patent dates to be established on the basis of preliminary informal filing provided a complete application is filed within 12 months of the earliest preliminary or foreign application relied upon. This will undoubtedly give rise to many questions as to the adequacy of the original disclosure, but on the whole it appears to us that the Commission's recommendations accord with actual practice in which new suggestions and inventive concepts are in fact disclosed to the world in speeches, professional papers and the like rather than in strict and formal disclosures such as have become customary in existing patent practice. It must be noted, also, that Recommendation VII would require that an application be published between 18 and 24 months after its earliest effective filing date and the public be given opportunity to cite anticipation by prior disclosures. Note, also, that it is proposed in Recommendation XVIII that the life of a patent be 20 years from its filing date and not be dependent on date of issue.

Protection Against Unauthorized Disclosure

In view of the pressure for early filing imposed by Recommendation I, Recommendation III offers protection for certain forms of early display and also protection against improper disclosure. We accept Recommendation III as a constructive suggestion for providing protection to an inventor or owner. The Commission's Recommendation III is likewise a constructive suggestion in providing for protection of an inventor or owner against unauthorized disclosure by a former employ-

ee or otherwise as in accordance with experience and business practice. This recommendation likewise permits disclosures of inventions in officially recognized international displays. It seems to us that along with the pressure upon an inventor or assignee for early and adequate disclosure it is well to provide reasonable protection against improper disclosure in the race for early publication.

*Need for Protection of Designs, Biological Developments
and Production Know-How*

One of the recommendations with which business does not find it so easy to be sympathetic is Recommendation IV. The Commission, because of its concern with assuring true novelty, and the concurrent requirement for a search of prior art, has recommended that the protection of ornamental designs, novel plant material and computer programs be denied patent coverage but instead be afforded some other form of protection. We readily recognize the difficulty in classifying and searching artistic and non-verbal material. To date patent systems and the retrieval of data is largely based on word recognition. It is important, however, that the social and commercial utility of ornamental designs, agricultural plant materials, and business data processing be adequately recognized and protected. So, too, business procedures, such as detailed manufacturing drawings and production processes, in tangible form, should be given adequate recognition and protection. They frequently make the difference between uneconomic concepts and practical reduction to useful form. It is important that suitable "open" legal methods of protection be developed, for the alternative is secrecy with resulting lack of communication and information useful to society. Accordingly it is to be hoped that this need will be met on an "urgent" basis and not merely put aside because of the difficult or intangible nature of the problem.

Application for Patent By Assignee As Well As Inventor

Recommendation V proposes that a patent may be applied for by the assignee as well as the inventor. This recognizes the true economic interests in patents and the way in which such values are actually made useful. With reasonable safeguards this provision can be operated to protect inventors and their rights. It would facilitate the disclosures called for by the recommended changes in procedure. Bringing United States patent practice in this respect into agreement with foreign procedures is also a desirable harmonization of world patent practice.

Publication of Applications

A recommendation which is certain to receive careful examination is Recommendation VII. This provides that if an application is not abandoned then, 18 to 24 months after its earliest effective filing date, or promptly after allowance or appeal, whichever is earlier, the application will be published for public examination. An applicant can request earlier publication. Such disclosure will permit the public to inform the Patent Office of any prior art which should be considered before the decision to grant the patent is finalized. This procedure, which is further amplified by Recommendation XI, is part of the effort to strengthen patents and increase the certainty of their survival by allowing opportunity for opposition and the citation of anticipating reference. It is to be noted that applicants will still have the privilege of retaining their patent filing in secrecy if they decide to abandon the application and do not request the issuance of a patent. On balance it is believed that the benefits from the recommended procedure outweigh the possible disadvantages, and that prior knowledge of anticipation is preferable to issuance of a patent and subsequent invalidation. Moreover the proposed simplicity and confidentiality of disclosures to the Patent Office is in the interest of practical business operation when it seeks to inform the Office of known data or practice.

Optional Deferred Examination

Recommendation IX proposes that statutory authority be granted for the Patent Office to employ the technique of deferred examination of patent applications. This, like others of the recommendations, is aimed primarily at improving the operation of the Patent Office through a reduction in its work load. In effect what is proposed is that a patent application would not be examined unless the applicant requested it and this would allow the applicant opportunity for exploration of his concept in the marketplace before the Office or he is required to devote substantial time and cost to the patent prosecution.

Actually all that is being requested is that the United States be given opportunity to experiment with deferred examination and to be in a position to use it if experience elsewhere (the Netherlands and Germany are exploring this technique) or in the United States proves it worthwhile. It is estimated that only half or less of all applications filed would be given full examination, with resulting savings to the Office and applicants.

Business, which itself performs so much research and development, should be willing to engage in reasonable experimentation provided always that it be aimed at strengthening and raising the quality of the patent system.

Burden of Proof

Another recommendation which may also raise questions is Recommendation X. This proposes that the applicant shall have the burden of proof that his claim is patentable. This, like many of the recommendations, is aimed at raising the quality and reliability of United States patents. It is not intended, by this recommendation, to require the applicant to be responsible for world-wide searches of literature or use. It is merely an affirmation that after citation of prior art by the Patent Office, the applicant must establish beyond a reasonable doubt, and not merely by presumption, that the invention claimed is patentable. Here again, sound and reasonable practice by the Office and the profession should result in this recommendation contributing to improvement in the United States patent system and its product.

Ex Parte Citation of Anticipation

Recommendation XI proposes a means for *ex parte* citation of prior use or disclosure against an application which has been published as a prerequisite to issuance. The novelty in the proposal is that it would allow such action to be taken on the basis of informal, uncontested disclosure rather than a legalistic adversary procedure.

We have already referred to the effect of this recommendation above. On the whole we consider the recommendation constructive and hope that business and the professions will favor its adoption.

Cancellation and Restriction in the Light of Subsequent Disclosures

We likewise consider it in the interest of business to accept the Commission's Recommendation XV for later cancellation or restriction of claims if later disclosures of prior art indicate an earlier application or claim to be anticipated. So, too, the provision suggested by Recommendation XI that the public may cite prior art following publication of the application will permit proper restriction of any patent issued to what is original. This is a rational and efficient means for preserving what is truly new and creative while deleting what has

been anticipated. It would likewise reinforce the desire for adequacy of early disclosure by removing a fear of excessive penalties for excessive disclosures. The overall effect of these provisions should be to strengthen the presumption of validity of issued patents and enhance their survival in litigation.

Term of Patent Dated from Filing

As mentioned above, Recommendation XVIII proposed that the term of United States patents be determined from the earliest effective date of filing rather than date of issue. This is a major change in United States practice but conforms to most foreign patent systems. The purpose of the suggestion is to encourage rapid prosecution of patents rather than the reverse. There is no doubt that this is contrary to the objectives of some patent applicants but I have been assured that on the whole United States industry is prepared to accept availability of information on patents and technological data of others in exchange for earlier issue of its own patents. Certainly this would seem to be in the public interest and we are all members of the public.

Infringement by Importation

Business likewise welcomes the recognition given by Recommendation XXI that the importation of goods which infringe on United States patent rights will itself constitute patent infringement. We believe this to be far preferable to the present situation where foreign manufacturers in the absence of a foreign patent can provide safe access to the United States market even when a United States patent prevents local infringement.

Clarification of Rights Under Patents

Recommendation XXII proposes statutory clarification of the rights granted with a patent. It is suggested that the owner's right to use or to license his patented inventions be spelled out by statute. Although it is asking a great deal to hope for a perfect panacea, clarification of a patentee's rights with respect to his limited monopoly—limited both in time and in subject—could certainly be helpful. There is need for intelligent reconciliation between the proper restraints of the antitrust laws and the positive but transitory rights of the patentee. Certainly there is no reason to oppose an attempt to achieve such clarification.

Judicial Determinations In Patent Matter Conclusive "in Rem"

Recommendation XXIII proposes that final adverse judicial determinations regarding patents shall be conclusive as to the patent right itself and not merely with respect to the parties to the litigation. This distinguishes from present practice where a holding between two parties is not determinative as to others and is not effective outside the jurisdiction of the specific court. Clearly the recommendation is a simplification and improvement over present procedure and accords with good sense. Both patentee and alleged infringer are entitled to their day in court, but any proper hearing, conducted fairly and adequately, should suffice for determination of the rights in question and it should not be possible for either party to prolong patent litigation by repeated suits in other jurisdictions. It is believed that this recommendation is worthy of support.

Creation of Civil Commissioner to Simplify and Expedite Hearings

The last of the Commission's recommendations which we will discuss is XXIV. This proposes the creation of a Civil Commissioner in the District Courts, where justified, to preside at pretrial hearings, depositions and the like. The purpose is to achieve reasonable and efficient operation under discovery procedures. The objective is to obtain effectiveness without abuse of either party and to do so at reasonable cost. Obviously the benefits of the proposal would depend on the jurisdiction and authority granted, and the manner of its exercise. The desirability of the objective is not denied and assistance should be provided for its sound implementation.

Patent Trial by Stipulation of Facts

A companion recommendation to the preceding recommendation of XXIV is the proposal of Recommendation XXV that parties to patent litigation may submit the matter to trial by stipulation of the facts. Rather naturally this simplification of procedure is suggested only where damages are limited and no injunction is sought. Clearly a procedure of the kind suggested could expedite and reduce the cost of patent litigation at the same time that it provides opportunity for fair consideration of the rights of both parties. It is believed that this would constitute improvement over the present methods and thus be a step forward in promoting the usefulness of the patent system.

OTHER RECOMMENDATIONS TO IMPROVE PATENT OFFICE

The report contains a number of other recommendations. They are primarily directed toward improving the operations of the Patent Office. For example Recommendation XXVI proposes the creation of an advisory council to the Patent Office drawn from the principal sectors of society served by the patent system to provide continuing review and suggestions for improvement; Recommendation XXVII urges adequate financial support of the Patent Office; Recommendation XXIX suggests the establishment of a study group to assist the Patent Office in developing optimum classification systems and means for collecting, storing and retrieving data, hopefully employing systems which will be harmonious with the systems and methods of other nations; Recommendation XXX urges the Patent Office to proceed vigorously with the microforming of its own search data and to cooperate with other nations to develop worldwide indices and data retrieval systems. These and the other recommendations are worthy of careful and sympathetic study and support.

In summary, speaking as a businessman, I believe that the recommendations of the President's Commission on the Patent System do offer means for improving and promoting the practice of useful arts in a period of exploding technology. The suggestions for increasing the availability of technological data, and expediting the determination of rights in inventions proposed by the Commission, all appear to be in the interest of business and society, and I therefore look for business support of these proposals.

The Anti-Inventor Report of the President's Commission on the Patent System

JACOB RABINOW*

INTRODUCTION

IN ONE OF THE OPENING PARAGRAPHS OF ITS REPORT, the Commission asks itself "What is the basic worth of a patent system in the context of present-day conditions?" And the Commission answers, "The members of the Commission unanimously agreed that a patent system today is capable of continuing to provide an incentive to research, development and innovation. They have discovered no practical substitute for the unique service it renders." The Commission then sets up five objectives for the development of a new patent system and proceeds to write a series of 35 recommendations for the new system. It is amazing to me that a commission composed of such high intelligence and undoubtedly high-minded individuals could do no better than propose such a series of solutions to the imaginary and real problems of the patent system of the United States—solutions which in almost every case are directed against the inventor. Whenever a problem of simplification or modification arose, the Commission could do no better than to achieve its aims by limiting the rights to the inventor or reducing the incentive to the inventor and the innovator.

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There are perhaps four major groups which are directly concerned with the patent system of the United States. One, of course, is that of the inventors. The second comprises the manufacturers, who may or may not be infringers of a patent. Third is the Patent Office of the United States. Finally, there is the country as a whole—often called the public. Now, a patent system can be designed to help any of these sectors at the expense of any of the others. There is no argument, of course, that the system should be designed to help the country as a whole, and there is no argument that, in a practical world, a set of patent laws should be so designed that they can be easily, or at least relatively easily, implemented by the Patent Office and by the courts. Therefore, there is no question that the Commission should properly address itself to the problems besetting the Patent Office and make an attempt to help it.

Nor can there be any question that the patent system should be such as to encourage the manufacturers of patented products and the users of patented processes. This has many ramifications. In some cases the early issue of an unambiguous patent helps both the owner of the patent and his competitors. In other cases, particularly those concerned with chemicals or biological inventions, there is a need to protect the manufacturer during a long period of test and modification. A fine balance must be struck between granting a monopoly to the manufacturer of a patented article and the encouragement of competition from others.

INCENTIVES

Finally, we come to a very basic question as to the amount of rewards and incentives to be offered to the inventor and his backers. This is the most basic and crucial question and it seems to me the Commission did not either directly or indirectly address itself to this. Quite aside from the rules and regulations of the Patent Office and the laws that have to be enforced by the courts; and quite apart from the questions of costs of litigation and all the other things on which the Commission apparently spent a great deal of time, there is the basic question: Does the present system offer the correct amount of reward to the inventor and innovator; does it offer too little, or does it offer too much? Unless one faces these questions squarely, no discussion of our present patent system or a proposal for a new one makes any sense. Apparently the Commission felt that the inventor today has more than ample rights, and reducing his rights quite considerably will not hurt the nation.

In this article I presume to speak for the inventors. I do not claim to know whether the rewards and incentives given us are sufficient or not. If it is true that our patent system has greatly benefited our country, and has done so for 130 years, I could perhaps argue with some merit that the rewards should be increased so that the patent system could help still further. I will not take this position. I do not know, and there is no objective and quick way of knowing, whether increasing or decreasing the incentives will help or hinder the technological and economic progress of the country. If the Commission meant what it said in the preamble, that inventions are good and necessary and that rewards should be given to inventors to invent and to innovators to innovate, then I take the position that the present proposal is bad and that the Commission performed a great disservice to the nation.

I do not say that every recommendation of the Commission's report is objectionable. I, for example, support the "first-to-file" system with considerable misgivings as to its value and with certain suggested changes in its implementation. Because I believe in an international patent system and because I believe this cannot be achieved without the American patent system being put somewhat in line with others, I take this stand. But if an international patent system cannot be achieved or if it can be achieved only in some dim and distant future, then even this recommendation is basically unnecessary and unsound.

I believe that a patent is more than just a simple economic right—much as the laws undoubtedly have to treat it as such. There is a human and emotional element to patents which is hard to put on paper. There are fundamental questions of justice, or right, of personal achievement, of glory, and if you will, of glamour, and these must be considered when incentives to inventors are discussed. The United States patent system has given the inventor more of these emotional rewards than any other system in the world. I sincerely believe that this is one of the many magnificent reasons for the industrial greatness of this nation. In the first-to-file system, as in all of the other proposals, this report seems to disregard this human factor and to decrease the very real emotional incentives to invent and innovate.

Let me take a group of the recommendations and imagine how they would affect an invention and a patent application under the proposed legislation.

AN INVENTION UNDER THE NEW LAW

Suppose, then, I invent a device or a process. There is immediate pressure on me to file at the earliest possible date. Under the present

system, if I immediately start to develop it and discuss it with my staff and outsiders whom I trust, I know that a rush to the Patent Office is unnecessary and, in fact, unwise. One doesn't think of all the aspects of an invention at the first blush. Under the proposed system I would tend to pressure my patent attorney to file early. I might say that the Commission realized this and therefore inserted a rather complicated set of recommendations for preliminary filing which, they hoped, could be done quite hastily and informally. The people who wrote the proposed bills, however, realized that this kind of preliminary work would not be very useful unless it is complete to such an extent that it could support all subsequent claims. My patent attorneys tell me that if they are going to do this they might as well file the final application, particularly if it is a very long and involved patent such as a reading machine or computer. If, on the other hand, it is for a simple invention that can be described in one or two pages, they might as well file the final application and not have to do it twice.

In any case, I file a preliminary or a final (preferably a final) as soon as I can. The actions go through their normal delays and waiting in the Patent Office and at my attorneys'.

Eighteen months or so after it was filed, it is published. None of the claims have yet been finalized, neither I nor the public knows which claims are going to be finally allowed. No one knows what the Patent Office will or will not cite against me because it may well be that in 18 months there has been no action or there has been no agreement as to claims. The public is invited to send in documents and evidence that will help the Patent Office pass upon the case. The public doesn't know what will be useful or not. The probability is that either the public will not bother or, if it does bother, it will send in a completely useless avalanche of information which the Patent Office already has and is perfectly capable of referring to without outside help.

Finally, let us hope that my attorneys and I overcome all of the objections generated both inside and outside of the Patent Office and I finally get a patent. Having lived through all this difficulty I am reasonably sure I have a good and, perhaps, basic patent. I have spent some additional money developing it further, applying for additional patents on improvements and modifications. Having the basic patent in my hand, I either go into production or try to license the invention, or both. In any case I try to innovate the product.

If I try to sell the invention, a sword of Damocles hangs over my head. Within three years, any outside party can come in and by paying what the Commission feels is a high fee—\$500 or so—produce evidence which they withheld until now to show that the invention really

cannot be patented. They happen to know of some art practiced in some dark corner of Africa of which the Commission and I were not aware.

Or, if I go into production, the competitor who has been quiet until this moment and who waited to see how the invention developed, and who sees that the product is catching on and that the market is opening up, introduces new evidence and again, by paying a rather trivial fee for an infringer, kills my patent.

In the present system if I threaten the third party with an infringement suit, he can argue the validity of my patent. We are both in court, we can ask questions, and a judge can decide the merits of the case. Under the present proposal I cannot take a counteraction. The possible infringer or the opposer runs no risk except losing his \$500 and he knows, further, that he can take it to court at a later time if he so wishes.

Finally, I overcome this opposition also. I prove that the patent should be issued, perhaps losing a claim or two, and the patent is kept in force. I keep spending more money as an innovator, and feel quite sure that I have a patent. The opposition is not satisfied. It starts to infringe. It takes me to court and presents either old or new art and the court holds the patent invalid. I appeal. The appeals court confirms the decision of the lower court—the patent is invalid—and the claims are stricken from the record. At this late stage I lose everything. I have no further recourse.

Suppose that even here I win. Suppose the patent claims are held valid and infringed and the case is appealed and I win again. Does this settle the matter? No, not at all. I am still living under a blade and this is not merely the sword of Damocles, it is a swinging pendulum of Poe. Anyone else can start infringing and I can repeat the suit, and the patent can be held valid five times, and finally held invalid on the sixth try.

It seems to me that the injustices of these proposals are so obvious they do not require a detailed spelling out. Permit me then, with all due respect to the Commission, to propose a simplified procedure. Let us assume that the first-to-file, because of its international aspects, is a worthy aim. Let us concede moreover that the question of interferences of which much has been made in public discussions is really a trifling one and essentially a straw man. The following figures are worth noting in this connection. In 1964 there were about 88,000 patents applied for, of which 987, or about 1 percent went into interference. In 1965 there were about 89,000 patent applications of which 651 were in interference, or less than 1 percent. In 1963 there

were 93,000 patent applications of which only 473 were in interference, or less than $\frac{1}{2}$ percent. Of those that were in interference, more than half were conceded to the first to file, less than half were involved in taking testimony, and of those, the junior party won some 40 percent. The overall story on interferences, then, is that some fraction of 1 percent are won by the junior party—something like $\frac{1}{8}$ of 1 percent. One could argue that this $\frac{1}{8}$ of 1 percent could involve an important patent and this is undoubtedly so. But the American patent system doesn't reward the first inventor but the first diligent inventor who reduces to practice, and preferably applies for a patent. It seems then that the question of interferences is not important if the inventor knows that he has time diligently to pursue the invention and to prepare and file an application.

THE FIRST TO FILE AND THE FIRST TO INVENT

I therefore propose the following, and this idea is not mine but was proposed by my young daughter who also happens to be an inventor. Let us then have the first to file get the patent, but let us, nevertheless, set up a limited interference procedure if two or more inventors file on the same invention within, say, one year of each other. If the junior party so desires let testimony be taken as in the present case. If the junior party can prove that he invented first, and reduced to practice first, let him have a nonexclusive, nontransferrable free license to use and market the product of the invention in his own name or in the name of his employer at the time he made the invention.

This limited interference procedure would take the great pressure from the rush to the Patent Office and would have some very important secondary benefits. Under the Commission's proposal a man who overhears another, or who happens to pick up information by going through a plant as a visitor, could easily be the first to file and win the patent and there would be no way of cross-examining him or of bring derogatory evidence into the open except by suing him for theft. If the parties involved know that there is a regular procedure by which evidence can be taken, the incentive to copy an idea, (if you don't like the word steal) would be very much reduced, and certainly the pressure to file in a hurry would be greatly reduced. This is particularly true for the patents filed by large corporations who are basically interested in patents to protect their own manufacturing freedom and not as a source of revenue.

Some countries protect the first inventor from the first to file even if

the first inventor does not file for a patent application, and this is being proposed in an amendment to the present pending legislation. I suggest that if this is done it will merely encourage secrecy because a manufacturer who is not interested in exploiting his patents by licensing would be fully protected by merely keeping his patent in use and not disclosing it to others. Giving such a manufacturer a nonexclusive license could be very unfair to a subsequent inventor who does disclose his invention by filing in the Patent Office and who might not have expended the effort and money on the invention if he knew that the invention was already in use by, perhaps, the only potential customer. In general, I agree with the implied aims for our patent system and with the expressed opinions of the President's Commission that secrecy in our civilian technology should be discouraged.

Another reason for setting up interference, outside of the matter of rights to the first to invent, is to decide who is entitled to what claims. It is certainly necessary that claim copying be allowed, otherwise one gets into the silly situation that the first to file may receive much weaker claims than the second to file.

The third benefit of an interference procedure is that it would eliminate the need and waste involved in filing preliminary applications since the pressures to get an early date would be greatly reduced for most, but not all, patent applications.

As far as preliminary applications go, I think it is a bone thrown to the inventor by the Commission who, I believe, felt very uneasy about the justice of giving the patent to the first to file. The preliminary application, which could be multiplied several fold before the final application is filed, would be a flood of paper which the Patent Office certainly does not need and which is not likely to help the inventor.

PUBLICATION BEFORE ISSUE

I like the idea of publication of the application before issue, but not in the manner proposed by the Commission. I think the application should go through the Patent Office in the normal way and after the proper claims have been allowed, the patent should be published as at present with the whole case released to public inspection. This should be done, say, six months before the final issue. The public then would know what the patent contains, what the claims say, what the Patent Office cited in the case and if the public has anything to contribute it should be done at this point, and not before. It may well be that the public will have very little to contribute and that the amount of

additional paper that the Patent Office will have to examine will be quite small. If new and pertinent art is cited it would require a change of claims. This would be done by amendment or some of the claims may be disallowed. Finally the case should be ready for issue after the new prosecution. There should be no further outside interference.

After the patent has been issued, there should be no further actions by third parties in the Patent Office. The three-year invalidation procedure is an intolerable procedure. If no infringement arises, there will be no threats, and no validity test in court. If a third party thinks that the patent is invalid, let him take his chances and infringe and let us have a day in court and let the laws provide that what is sauce for the goose is sauce for the gander. If a first court and an appeals court hold a claim of the patent valid, let it be valid for the life of the patent and not be contestable. If it is held invalid and the appeal sustains this, let it then be, as in the Commission's proposal, invalid, and invalid for all time and stricken from the record.

I have heard objections to the above based on the possibility that the holder of a patent may deliberately pick a weak opponent. Various safeguards can be suggested. The simplest is not to change the present laws about patent trials in court, or let the C.C.P.A. handle validity cases.

Now let us look at some of the other proposals and how they discriminate against the inventor. For example, the terminal disclaimer rights are reduced. The argument is that the inventor should not get broader rights than absolutely necessary to define a monopoly. This goes back to my fundamental question. Should or shouldn't the inventor have broad rights? If the terminal disclaimer does not hurt the public and gives the inventor some additional freedom, then why not maintain the present practice?

Take the matter of the reissue of a patent. A mistake has occurred. The inventor asks for reissue. Today he can change all of the claims, broaden them or modify them so as to get his full rights. If some third party has started to manufacture in ignorance of the new and possibly broader patents, he has certain intervening rights which protect him. The Commission's report says that reissued patents cannot broaden the rights under any conditions. Again, why? If there was a mistake made, why should the inventor be penalized by the mistake? Why not give the invention the broadest possible protection?

Take the matter of the patent life of 20 years from the date of filing rather than 17 from the date of issue. The Commission states that this is done in order to prevent the attorneys for the inventor (implying, of course, that they are somewhat dishonest, possibly along with the

inventor) from deliberately doing various tricks to stretch the period of pendency so as to get longer patent protection. Having discussed this matter with many attorneys I find that the Patent Office has ample rules and regulations by which they can bring the issue to a close, and if the rules are not sufficient, they can certainly be strengthened. The fact is that an important patent may (and almost always does) take longer to go through the Patent Office than a minor invention. The more basic the invention the more difficult is the search and the more difficult is the definition of what is new and what is old. If the important inventions do take considerable time to get through the actions of the Patent Office, ordinary sense of justice should indicate that the inventor should not be penalized. Seventeen years from the date of issue should certainly be maintained. This is another subject that has to do with international patenting, but since the laws of each country will be different and the rights of the inventor will be different no matter what international patent agreement is obtained in the foreseeable future, it seems that the local rights of the inventor, the fees and the taxes he pays, the life of the patent, his rights to sue and many other things will have to remain different in every country. The inventor should not be penalized because the Patent Office doesn't have the rules to cope with the shady practices of attorneys.

Take the matter of fees. The new recommendation is that the Patent Office should not be completely, but more or less completely, self-supporting. If the patent system of the United States is, in fact, promulgated for the benefit of all the people, then what sort of justice is it for the inventor and his backers to carry the expense of the system? Why not argue then that the Supreme Court should be self-supporting by collecting, say, a 5 percent fee on the value of the cases before it? And how about the Bureau of Standards and the Weather Bureau and the Department of Agriculture? And how about the Army and Navy? This last has been tried with somewhat dubious success.

Consider the matter of the present grace period and the Commission's rather curious suggestion that the preliminary applications be considered somewhat as a substitute for the grace period by giving the inventor a year in which to perfect and test the marketability of his invention. The Commission is far too sophisticated to make such a naive statement. One year is nowhere near enough a length of time to perfect and test an invention. We do not, in fact, live under the grace-period system. If anyone wants to file abroad, and nearly all of the important patents are involved in foreign filing, no one dares to

publish before the patent is filed. I think that the grace period and the arguments about it are mainly a straw man and the substitution of a preliminary filing for the grace period, in my opinion, is of little value.

PRESUMPTION OF CORRECTNESS

There is the matter of writing into law the statement that the decisions of the Patent Office in denying a claim should have the presumption of correctness. This means that the court will not review the subjective matter of the Examiner's opinion but only his legal right to pass upon the claim. I think that this is a difficult and a touchy subject. Certainly I would like to see the decisions of the Patent Office have the presumption of validity both in denying and issuing claims. But because of the great difficulty of getting and keeping extremely competent personnel in the Patent Office, because of the fact that the salaries of the Examiners are lower than the competing salaries of the patent attorneys outside, because of the fact that the arts are getting more difficult to search and because of the complexities of modern science and the great proliferation of documents, I think it would be unfair to the inventor not to be able to get a review of the actions of the Patent Office. I happen to be a great admirer of the decisions rendered by the C.C.P.A. and have followed them for the last 10 to 15 years. At a meeting of a great many patent attorneys a few months ago, I asked the question and the chairman put it to a vote as to whether the opinions rendered by the C.C.P.A. are the kind of opinions that these eminent patent attorneys would have rendered if they were on the bench. The show of hands gave a unanimous support to the decisions of this court.

There is an objection at the present time to the fact that the decision of the Patent Office can be appealed via a double course, either by taking it to the C.C.P.A. or the District Court of the District of Columbia. I think that this double-track system should be eliminated. I think that the appeal from the Patent Office should be limited to the C.C.P.A., and that the appeals from this court should be only to the Supreme Court of the United States. This is a simplification of the present procedures and would eliminate a great deal of litigation.

DEFERRED EXAMINATION

I would now like to touch upon the peculiar conclusions of the

Commission that they do not particularly like the deferred examination but they recommend that it be made optional with the Secretary of Commerce, or his delegate, at some future date. I object most violently to the proposal for a system of patents where you file now and pay later. The tendency will be to file more applications with the assumption that some of them will be dropped. Certainly the only way the deferred examination can help the Patent Office (for whom it is obviously intended) is by the abandonment of many applications. This is not the way to strengthen the patent system. There are many ways of forcing abandonment, particularly those practiced in Europe, such as raising fees during the life of the patent, deferred examinations, and other such devices.

In the case of my watch regulator which is a patent that earned me some considerable money (and I might add the only one that did so), it took me nine years to sell the first license. If the deferred examination were in effect, I might very well have abandoned the application because for the first five years I couldn't arouse any interest at all in the invention.

If a deferred examination is to be promulgated in spite of the great opposition to the proposal, then I think it should be done by Congress, after public hearings and all the other safeguards inherent in our democratic system. It should not be done by the Patent Office acting through the Secretary of Commerce. The laws of the land are much too important and far too many interests lie outside of the Patent Office for it to be allowed to make such a basic change.

While on the subject of deferred examination, I was most amazed at the recommendation that third parties should be able to enter the Patent Office with a request that the deferred examination be put through its full examination cycle. At one time, when I was a small businessman, I had some 30 patents pending on reading machines. Since money was always very tight it would have been more than likely that if a deferred examination were in effect I would have deferred the final actions until I knew better what I could or could not afford. A third party—some large corporation—could have come in and by paying the relatively trifling fees would have forced me to enter a full-scale prosecution of some 30 cases, all at the same time. I would like to suggest that this is so obviously an injustice to the small inventor, one who might not have 30 cases pending but, let us say, five or 10, that it is beyond my understanding. The argument that the third party is entitled to know what his rights are is certainly true. I think this should be done by having a full examination system, as we have at present, and which has worked so beautifully in the past.

ONE WORLD—ONE PATENT

Having said so many things in opposition to the recommendations, let me say something in support. Because the world is shrinking—because the number of nations is rising, because more and more people file in more and more countries, it would be a great service to the inventor, to the patent systems and to the people of the world to have one search and one patent issued on one invention. This patent should be respected all over the world. This does not mean that the inventor would have equal rights in all countries. As I said before, these rights could be different, but at least the examination of the pertinent art and the technical aspects of the patent could be made uniform and issued in one place at one time. The fee could be many times the fee charged by any national patent system today and still the savings to the inventor would be very great. In the case of my magnetic particle clutch, I filed in 22 foreign countries. There were some 44 patents involved, and the initial filing fees and attorney fees amounted to some \$37,000. This was by no means the final cost and did not involve any litigation, any interferences, or difficulties of any kind.

It is because I believe in an international patent and international cooperation that I support the first to file, but with the changes that I have outlined above. It is interesting to note that in some 20 countries a first to invent does have some rights against the one who wins the patent by being the first to file, and the proposal for limited interference and a limited license to the first inventor would certainly eliminate many of the objections to the first-to-file system.

UPGRADING THE PATENT SYSTEM

Finally, I would like to add my personal recommendations for the upgrading of our patent system. I do not believe that any patent system can be better than the people who administer it—I mean the Examiners and the whole staff in the Patent Office. I do not mean to belittle the present staff. There is no agency in the government that has a record as clear of blemish as the Patent Office. There is no question about their competence, their devotion and their honesty. But the Patent Office suffers, in our competitive world, because of the present inability to pay the kind of salaries necessary to attract and keep the kind and number of people it needs, and it suffers from lack of space. I think that the staff should be greatly enlarged—I think the

salaries should be greatly raised—I think the building and other space should be completely replaced by a modern plant worthy of our technological position in the world. I think if this were done the questions of correctness, the respect for the decisions of the Patent Office, and the quality of the patents will all automatically fall into place. This kind of improvement cannot be done by writing new laws. As long as our Examiners work essentially under a production-incentive system, as long as outside competition makes it attractive for them to leave for private practice after two or three years at the Patent Office, as long as the working space is crowded and unattractive, we shall not have the kind of patent system that the country deserves.

My closing note is this: I do not know of any ground swell of objections to the present patent system. I am a member of the Inventors' Council and I know a great many inventors outside of it. I also know a great many patent attorneys and I have taken part in many meetings of various patent associations. Outside of the fact that the Patent Office is experiencing difficulties, I know of no clamor that says that our present patent system is unfair to the inventor, to the manufacturer, or to the general public. Nevertheless, I believe that an occasional re-examination of existing laws is advisable—changes can always be made in an existing order, but these changes should be made to improve the system, not merely to change it, and the patent law of the country is much too important to be changed if the only difficulty is that experienced by the Patent Office. Congress should see to it that this is corrected. Let us be very careful as to how we modify the best patent system in the world.

Commentary on "Patent Policy for Government - Sponsored Research and Development"

BARKEV S. SANDERS*

INTRODUCTION

IN AN EARLIER ISSUE OF *IDEA* Professor Robert A. Solo had an article with the above title.¹ The factual portion of Professor Solo's article is a confirmation of other studies of the negligible contribution that federal R&D outlays have made to the civilian economy as spin-offs in terms of patented inventions. It was this aspect that led to the careful perusal of the article which emphasized to this commentator some of the imperfections of Professor Solo's article.

To point out these flaws, more important, to emphasize the consistency of these findings with the point of view that has been espoused by this commentator,² and to question the logic of Professor Solo's recipe on how to transmute this government dross into creative gold is the aim of this commentary.

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¹ *IDEA*, Vol. 10, No. 2 (Summer 1966), pp. 143-206.

² Sanders, B. S., "What Should the Federal Government's Patent Policy Be?," *IDEA*, Vol. 8, No. 2 (Summer 1964), pp. 168-198.

_____, "Comparative Yield from Government Versus Industry Financed R&D," *IDEA*, Vol. 9, No. 1 (Spring 1965), pp. 1-24.

_____, "Further Observations on Comparative Patent Yields from Government Versus Industry Financed R&D," *IDEA*, Vol. 10, No. 1 (Spring 1966), pp. 33-60.

On the main issue, that to date the large expenditures by government for R&D have had negligible returns, if these returns are measured in terms of economic gains realized through patented inventions, Professor Solo and this commentator agree fully. Professor Solo summarized his findings thus:

Benefits to the economy at large from the commercial non-space application of waived inventions have not been significant. Some 15 billions in R&D contracts, producing through 1964 more than 2,600 inventions by contractor employees, involving a complex and costly apparatus for waivers and patents, results after six years [actually seven years] in the commercial application of six inventions, none of them important. . . .³

The present commentator tried to quantify roughly the barrenness of government supplied R&D as far as economically useful patented inventions were concerned. He observed:

These 78 companies, while they accounted for 55 percent of all the federal R&D, accounted for only 28 percent of the company-supplied R&D, and the average company expenditure per patent was \$280,000. That is a 13-to-1 ratio in terms of patents granted.

When we consider the utilization rate of patents, my larger study—that is the Research Institute's larger study—indicates that some 50 to 60 percent of the private assigned patents are utilized commercially. The commercial utilization rate of patented inventions resulting from Government-supplied R&D is much smaller.

The 120 companies circularized by the Subcommittee were also asked to report the proportion of governmentally financed patented inventions that had been put to commercial use. The proportion of such patented inventions reported by the 78 companies which returned completed questionnaires was about 5 percent—a ratio of more than 10 to one compared with the utilization ratio obtained for patented inventions resulting from company-financed R&D funds.

Furthermore, such limited information as we have regarding the comparative monetary returns from Government R&D-generated patented inventions that are put to commercial use with such returns from company-generated patents would suggest most conservatively another 10 to one ratio. Thus, combining these three differentials indicates that our former ratio of \$1000 government-supplied R&D dollars being equivalent to [one] private company R&D dollar, as far as commercially productive patented inventions are concerned, seems, if anything, quite conservative. . . .⁴

It is seen that our main conclusions are consistent. However, when it comes to possible remedies I cannot see much merit in Professor Solo's recommendations.

Professor Solo's article is divided into three parts. The first part is historical, it essentially deals with pressures which went into shaping

³ *Supra* footnote 1, p. 175.

⁴ Sanders, B. S., *IDEA*, Vol. 9, Conference Number 1965, pp. 177-178.

up the Presidential Directive on government's patent policy in 1963. I find the analysis pertinent and well executed; but there are some assertions that have no factual basis. The second part is an examination of empirical experience with patents of the National Aeronautics and Space Administration. In this area while basically our findings and Professor Solo's agree, there are, however, some technical deficiencies.⁵ The third part consists of a series of policy recommendations by Professor Solo with respect to which I have many reservations and even apprehensions.

PART I

In this part Professor Solo observes:

In fact, the Presidential Directive has not yet caused a discernable difference in the disposition of the patented inventions arising under Government R&D contracts as indicated by currently available statistics. For example, it appears in connection with the Army, Navy, and Air Force, both in 1963 and 1964, that substantially all disclosures of inventions were made under contract clauses which gave to the contractor an option to retain title by filing a patent application. . . .⁶

In support of this assertion Professor Solo cites the *Second Annual Report on Government Patent Policy* (June 1965) by the Patent Advisory Panel to the Federal Council for Science and Technology. The statistics reported in that citation do not support Professor Solo's conclusion that the Directive had not had an effect. Of course the Directive was issued in October 1963 (fiscal year 1964), so it could not have had any bearing on patents issued in fiscal year 1963 or even disclosures of that year unless one assumes political events cast their shadow before them. But it appears to have influenced the proportion of disclosures and patent applications in which the government retained title in 1964. Table 1 taken from the *Third Annual Report*⁷ demonstrates this effect.

⁵ Many of the statistics cited by Professor Solo are at variance with another recent study based on NASA patent statistics, but I shall not dwell on that extensively. Watson, D.S., Holman, M.A., "An Evaluation of the Patent Policies of the National Aeronautics and Space Administration," prepared for the National Aeronautics and Space Administration by the Department of Economics, The George Washington University; Report of the Committee on Science and Astronautics, U.S. House of Representatives, 89th Congress, 2nd Session, Serial U, 1966, 174 pp.

⁶ *Supra* footnote 1, pp. 147-148.

⁷ *Annual Report on Government Patent Policy* (June 1966), Federal Council for Science and Technology.

TABLE 1

PERCENTAGE OF PATENT APPLICATIONS AND PATENTS ISSUED ON INVENTIONS BY GOVERNMENT EMPLOYEES AND CONTRACTORS
FOR WHICH THE TITLE WAS HELD BY THE GOVERNMENT—FISCAL YEARS 1963-65.^{a,b}

Dept.	Patent Applications—Percent Title Going To Government										Patents Issued—Percent Title Going To Government									
	Employee Inventors					Contractors					Employee Inventors					Contractors				
	1963	1964	1965	1963	1964	1965	1963	1964	1965	Combined	1963	1964	1965	1963	1964	1965	1963	1964	1965	Combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
HEW	100.0	83.3	100.0	33.3	66.7	39.3	37.5	73.3	54.1		100.0	100.0	0	75.0	100.0	100.0	81.8	100.0	100.0	
CIA	100.0	75.0	83.3	0.0	23.5	0.0	5.0	40.0	33.3		0	0	0	0.0	0.0	0	0.0	0.0	0	
USDA	100.0	99.3	97.7	100.0	100.0	100.0	100.0	99.3	97.7		97.8	93.2	98.8	0	0	100.0	97.8	93.2	98.8	
NSF	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0		0	0	0	0.0	25.0	0.0	0.0	25.0	0.0	
VA	50.0	42.9	80.0	0	0	0	50.0	42.9	80.0		100.0	100.0	66.7	0	0	100.0	100.0	100.0	75.0	
COMM.	92.9	100.0	90.0	0	0	0	92.9	100.0	90.0		93.8	100.0	88.9	0	0	0	93.8	100.0	88.9	
TR.	0	0.0	0	0	0	0	0	0.0	0		0	0	0	0	0	0	0	0	0	
TVA	100.0	100.0	100.0	0	0	0	100.0	100.0	100.0		100.0	100.0	100.0	0	0	0	100.0	100.0	100.0	
FAA	100.0	0	100.0	0.0	40.0	0	100.0	40.0	100.0		0	0	0.0	0.0	0.0	33.3	0.0	0.0	20.0	
INTER.	96.2	97.0	85.7	33.3	33.3	100.0	84.4	91.7	89.3		92.9	100.0	85.0	100.0	0	0	93.3	100.0	85.0	
AEC	100.0	100.0	100.0	92.2	88.9	93.2	92.2	90.1	93.3		100.0	100.0	100.0	66.0	81.1	79.4	66.1	81.1	79.8	
NASA	81.4	90.9	86.3	56.6	66.7	75.9	71.9	81.6	81.7		79.4	82.1	85.1	28.6	57.1	82.6	70.7	71.4	84.4	
ARMY	74.8	78.9	79.8	16.0	14.4	27.0	43.0	41.4	46.1		67.3	78.4	72.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
NAVY	66.4	72.4	79.1	35.4	46.5	43.2	47.3	58.0	60.2		60.2	57.7	64.6	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
A.F.	40.7	47.5	57.0	8.1	17.8	20.5	11.0	22.2	28.7		68.9	56.5	26.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
TOTAL	73.3	77.2	80.3	29.6	35.3	42.7	44.2	51.2	57.2		69.1	68.8	69.4	62.6	77.0	79.3	72.6	81.1	83.5	
NO.	1245	1444	1444	2473	2361	2295	3718	3805	3739		779	800	1021	334	322	348	496	439	553	

Source: *Annual Report on Government Patent Policy* (June 1966), Federal Council for Science and Technology.

^a A "0" signifies no frequency, while 0.0 signifies some frequency but 0 for the government-owned patents.

^b "N.A."—Statistics not given.

Looking to the three defense agencies, the proportion of patent applications for which the government retained title, for the Army there was a decline from 43.0 percent (column 8) in 1963 to 41.4 percent (column 9) in 1964 (combining government employees and contractors) and it went up to 46.1 percent (column 10) in 1965. For the Navy, however, there was a big increase in 1964, from 47.3 percent (8) in 1963 to 58.0 percent (9) in 1964 and 60.2 percent (10) in 1965.⁸ For the Air Force the corresponding percentages were 11.0 (8), 22.2 (9), and 28.7 (10), for 1963, 1964 and 1965, respectively. Considering NASA, the percentage of patent applications in which the government retained the title was 71.9 (8) in 1963, 81.6 (9) in 1964, and 81.7 (10) in 1965—again indicating a sharp change in 1964, the fiscal year in which the Presidential Directive was issued. For all agencies combined, these percentages are 44.2 (8) for 1963, 51.2 (9) for 1964, and 57.2 (10) for 1965. Patents issued also reflect this general tendency, even though for NASA itself the change between 1963 and 1964 is comparatively small—70.7 (17) and 71.4 (18) percent, respectively. The frequency of patents issued for which the title was left with contractors are not given for the three defense agencies. But for the departments for which this information is supplied the percentage of patents issued in which the title was held by the government was 72.6 (17) in 1963, 81.1 (18) in 1964, and 83.5 (19) in 1965—notwithstanding the fact that in all probability most of the patents issued in 1964 must have been applied for in 1963 and earlier—before the Presidential Directive—and the decision of who was to have the title, as a rule, is reached prior to filing the patent application.

The upward trend for government to retain title is observed both for inventions made by government employees and contractors. For instance, for employees the proportion of patent applications for which the government got the title were 73.3 (2), 77.2 (3), and 80.3 (4) for 1963, '64 and '65, respectively. With respect to patent applications from contractor disclosures, the corresponding percentages were 29.6 (5), 35.3 (6), and 42.7 (7). For patents issued, however, the percentages in which the government retained title did not change materially for patents resulting from government employees. These percentages were 69.1 (11), 68.8 (12), and 69.4 (13), for 1963, '64 and '65, respectively. However, for patents which resulted from disclosures by contractors the percentage in which the government took title increased overtime, i.e., 62.6 (14), 77.0 (15), and 79.3 (16), for 1963,

⁸ The numbers in parentheses refer to columns in Table 1.

'64 and '65, respectively. The failure for government-employee patents to reflect the effect of the new policy, while patents issued based on contractor disclosures do, coupled with the effect of the new policy apparent from patent applications based on employee disclosures would suggest perhaps a longer period of time that applications filed by the government for its own employees remain pending in the Patent Office in comparison with patent applications based on disclosures from contractors.

We are inclined to attribute the increases in the percentage of patent applications and patents issued reflected in the statistics summarized in Table 1 to the Presidential Directive. In this we have the support of the Federal Council for Science and Technology. In its *Annual Report*⁹ the Council observes:

Changes in agency policies and regulations have resulted in almost every instance in more restrictive contractual provisions on the granting of rights to contractors, and in obtaining a greater protection of the public interest in instances where exclusive commercial rights are retained by contractors. For example, prior to the issuance of the Policy Statement, contracting officers in the Department of Defense were required to obtain special permission to use a clause in a research and development contract which acquired title to resulting inventions on behalf of the Government; in all other cases, the clause used permitted the contractor to retain title. Since the change in the DOD patent regulations, however, the use of clauses acquiring title to resulting inventions on behalf of the Government is required as a matter of course in all situations recommended for such action in the Policy Statement. . . .

Other statistics disclose the fact that the discretionary authority of the agencies under the guidance of the Presidential Policy Statement has resulted in a greater use of clauses acquiring, or reserving the right to acquire, title to inventions on behalf of the Government. For example, statistics collected by the Department of Defense for the month of April 1965 showed an increase in the use of patent clauses either acquiring or reserving the right to acquire title to resulting inventions on behalf of the Government. The statistics for this one month period disclosed that clauses either acquiring or reserving the right to acquire title to resulting inventions were used in 187 out of 692 contract actions, whereas such clauses were used by the Department of Defense in only 46 instances out of a possible 24,253 in all of Fiscal Years 1963 and 1964 combined.¹⁰

Finally, as we have done, the Council cites the statistics showing an increase in the number of disclosures of inventions in which the government took the title. These statistics show that disclosures in which the government took the title were 5,519, 6,489 and 6,821 for 1963, 1964 and 1965, respectively. Percentagewise, the government's

⁹ *Supra* footnote 7, pp. 1-2.

¹⁰ *Ibid.* p. 2.

shares were 76.2, 80.7 and 83.4 for 1963, '64 and '65, respectively, thus confirming the evidence cited by us and our interpretation of it.

This criticism of Professor Solo's conclusion as to what the effect of the Directive has been applies equally to the following assertion:

In the National Aeronautics and Space Administration, change has been in the opposite direction, toward the norm of the Department of Defense. . . .¹¹

Statistics given in Table 1 appear to contradict the above assertion; we have already touched on these when considering Table 1.

PART II

To this reader the first paragraph in Part II could be confusing to the lay or casual reader. It reads:

Since 1958 NASA has accumulated two sets of inventions, both drawn from the same universe of technology. One set of inventions, produced by private contractors and by NASA research centers, is offered to the public for non-exclusive, royalty-free licensing. . . .¹²

We assume this first group represents the inventions by government and contractor employee inventions for which the government retains the title.

Then Professor Solo proceeds to characterize the other set thus:

The other set consists of inventions where exclusive commercial rights have been waived to R&D contractors who produced them. . . .

It seems to us this is an involved way to say that in this second set the contractors got the title—and the government has merely a license for royalty-free use when needed governmentally and not for the general market.

There is also serious question as to whether these above characterized two sets of inventions, even though drawn from the "same universe" of technology, can be regarded as unbiased samples from a universe, especially when one is considering the probability of their being put to commercial use. Yet, that seems to be the assumption on which Professor Solo proceeds, for he writes:

An examination of that record [record kept by NASA on inventions] offers a basis, so far the best available, for comparing the efficacy of the two alternative patent policies, freely offering patented inventions to all or of granting exclusive commercial rights to

¹¹ *Supra* footnote 1, p. 148.

¹² *Ibid.* p. 152.

individual contractors, as means of promoting the commercial application of the inventions produced through Government-sponsored R&D.¹³

While we concur that a comparison of the type that Professor Solo is making might prove instructive, at least suggestive, we cannot accept his rationale that opportunities and incentives for economically worthwhile inventions in government service are equivalent to those found in industry. In government much more often than in private industry strategic positions are filled on the bases of considerations often other than the qualifications of the individual for a given job. This is of great importance with respect to economic productivity of the employees. Similarly the promotional policies of the government with respect to its employees are not in terms of productivity only in the technical field in which the employee has competence. More specifically, employees of companies whose main concern is government contract, and those employees of other companies whose work is restricted to government contracts could differ (and probably do differ) systematically in their traits from other employees of these same companies. Because of these and many other qualitative differences it is questionable whether the productivity of inventions by government employees and employees of government contractors are on par—regardless how large the universe. The largeness of the universe is an asset for comparison only if there are no systematic differences making the two groups that are being compared incomparable, where the differences are random, otherwise large samples add to the difficulty of comparing them—they are of no advantage whatsoever.

Where the proportion of scientists to the number of disclosures is considered, question might be raised whether consideration should have been given to the fact that disclosures of contractor employees go through two sieves while that by NASA employees go through only one sieve. Furthermore, in spite of the fact that the comparison with respect to productivity is confined to 1965, the work of NASA employees has greater continuity than the work of employees of private contractors where the books with respect to a specific contract open and close with each individual contract and the disclosures flowing from such a contract could be affected by this differential.

Another questionable procedure is relating disclosures in a year to the R&D expenditures for that same year—as a rule the disclosures in one year are referable to expenditures incurred one or two years before. It is quite plausible that the time gap between the time for financial

¹³ *Ibid.*

outlay and the date of disclosure might be greater for private contractors—if true, this will indicate perhaps somewhat higher yield per unit of expenditure and this corrective factor could be larger for contractors vis-à-vis government employees.¹⁴

It is believed the validity of the following assumption is questionable:

Supervision, following its functional imperatives, would seek to minimize these inventive excursions and diversions from the R&D task-at-hand. There would seem, however, no a priori reason to suppose that this check on invention and disclosure would be intrinsically different or more or less severe for in-house than for out-of-house R&D.¹⁵

The statistics given in footnote 14 would contradict this assertion. The proportion of inventions received from contractors in 1959 in comparison to that received from NASA employees was 18 percent; in 1960 this increased to 58, then to 124, 211, 174, 292, 548 and 902 in 1966—this in spite of the assertion by Professor Solo of there being no intrinsic differences in opportunities to invent between in-house and out-of-house groups. We are of the opinion that such supervision as a general rule is much more lax for in-house as opposed to out-of-house work. Furthermore, as we have intimated, the deadlines for individual contracts further contribute to this greater limitation in productivity of the out-of-house R&D. The very assertion of high priority that NASA places on disclosures would also have the effect of relaxing pressure on government workers, whose work might lead to some disclosure.

Professor Solo discounts the practice of government contractor transferring an employee who has an inventive idea from government contract to his own in-house R&D. While we may agree in principle that probably it is not a widespread practice to transfer key people who conceive a new idea from the government contract division to the company's own R&D divisions, there is probably a common practice to transfer over time the more inventive employees to the appropriate

¹⁴ Statistics made available to this commentator by NASA indicate progressive acceleration of disclosures from contractor employees as compared with NASA employees. The annual figures given for NASA employees were 92, 123, 131, 212, 435, 412, 382 and 367 for the years 1959 through 1966, respectively and for the contractor employees for the same years 17, 71, 162, 449, 759, 1203, 2094 and 3301. If Professor Solo knew this, his method of comparison fails to make allowance for it. According to NASA officials the comparative funds for in-house as against out-of-house R&D have remained essentially constant over the years—90% to contractors and 10% to NASA's own employees.

¹⁵ *Ibid.* p. 156.

company divisions involved in in-house R&D for the company. This would not be in any sense evasion, this would be a more efficient use of manpower where the individual can advance best and contribute most to the company's success and to the society as well. (Emphasized by Table II, p. 161).

The actual definition of scientists may be different in government as compared with industry. Government often relies on paper record—graduation from a college or university—industry is more apt to rely on accomplishment. Nor is there any indication how the scientists in government or in industry who work on government-supplied R&D are separated from other scientists. In other words there could be serious doubts whether the different parameters used to compare productivity of NASA employees with NASA contractors are appropriate. In government not all the inventions come from employees who are paid from the R&D fund while the contractor's obligation is to transmit to the government only those disclosures of employees who were paid by the government-supplied R&D and that were completed within that time. Were the differences appreciated and allowances made for them? There is no indication of this, just as there is no indication that contractor disclosure rate has been rising very rapidly in comparison with that by NASA employees. These differences do not iron themselves out just because more than 50,000 scientists or five billion dollars are involved.

The wide variability in inventive productivity of different companies depicted in Table II is in line with our own findings with respect to companies circularized by the Senate Subcommittee on patents,¹⁶ and our own analyses of this experience.¹⁷

With respect to number of disclosures related to dollars, it should be appreciated of course that despite the apparent common definition of R&D supplied to different agencies by the National Science Foundation there is nevertheless wide variation in the different agencies as to what is included in R&D expenditures and what is excluded. Furthermore, the content of research activities vary widely within the different agencies and the criterion as to what should be reported as disclosure varies. Aside from these, the dollar figures given are obligations rather than actual expenditures. Furthermore, as we have mentioned earlier, the disclosures in a given year by and large cannot be

¹⁶ *Patent Practices of the Department of Defense*, Preliminary Report of the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, United States Senate, 87th Cong., 1st Sess., pursuant to S. Res. 55 (Washington, D. C.: G.P.O. 1961).

¹⁷ *Supra* footnote 2.

TABLE 2

DISCLOSURES IN ONE YEAR COMPARED WITH R&D OBLIGATIONS OF THE SAME DEPARTMENT IN THE PRECEDING YEAR AND PATENT APPLICATIONS
FOR 1965 RELATED TO R&D OBLIGATIONS FOR 1963—SEPARATELY FOR GOVERNMENT EMPLOYEES AND CONTRACTORS
AND THE TWO IN COMBINATION

Agency	1964 Disclosures Compared With 1963 Obligations In Millions Of Dollars								1965 Disclosures Compared With 1964 Obligations In Millions Of Dollars								1965 Patent Applications Filed Related To 1963 R&D Obligations In Millions Of Dollars					
	A	B	B/A	C	D	D/C (4)/(7)	(6)	(7)	(8)	E	F	F/E	G	H	H/G	(11)/ (14)	I	B/I	J	D/J	(17)/ (19)	(20)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)		
HEW	32	\$131.8	\$4.12	292	\$504.1	\$1.73	2.38			25	\$149.8	5.99	221	\$ 604.3	\$2.72	2.20	9	\$14.64	28	\$18.00	.81	
CIA	16	N.A.	Ind.	18	N.A.	Ind.	Ind.			15	N.A.	Ind.	24	N.A.	Ind.	Ind.	6	N.A.	9	N.A.	Ind.	
USDA	145	117.7	.81	37	42.5	1.15	.70			277	130.2	.47	41	51.3	1.25	.38	129	.91	3	14.17	.06	
NSF	0	11.7	Ind.	40	131.6	3.29	Ind.			0	13.4	Ind.	155	150.5	.97	Ind.	0	Ind.	12	11.00	Ind.	
VA	13	29.0	2.23	0	.9	Ind.	Ind.			10	32.9	3.29	0	.9	Ind.	Ind.	5	5.80	0	Ind.	Ind.	
COMM.	89	39.2	.44	1	12.1	12.1	.04			84	42.5	.51	2	10.3	5.20	.10	10	3.92	0	Ind.	Ind.	
TREAS.	5	1.3	.26	0	.2	Ind.	Ind.			9	1.9	.21	0	.4	Ind.	Ind.	0	Ind.	0	Ind.	Ind.	
TVA	28	3.4	.12	0	.2	Ind.	Ind.			32	4.9	.15	0	.3	Ind.	Ind.	8	.42	0	Ind.	Ind.	
FAA	12	27.0	2.25	20	56.4	2.82	.80			7	26.4	3.77	101	41.7	.41	9.20	3	9.00	0	Ind.	Ind.	
INTER.	72	72.3	1.00	27	19.3	.71	1.41			105	73.3	.70	50	38.5	.77	.91	42	1.72	14	1.38	1.25	
AEC	33	13.7	.42	1691	1060.6	.63	.67			36	21.5	.60	1613	1233.6	.76	.79	4	3.42	338	3.14	1.09	
NASA	507	381.3	.75	1040	2349.2	2.26	.33			407	695.4	1.71	1526	3999.9	2.62	.65	139	2.74	112	20.98	.13	
ARMY	834	443.2	.53	971	845.7	.87	.61			934	455.8	.49	1390	953.5	.69	.71	406	1.09	716	1.18	.92	
NAVY	1040	648.4	.62	1593	947.1	.59	1.05			1065	580.6	.55	1516	917.3	.61	.90	556	1.17	620	1.53	.76	
A.F.	243	409.0	1.68	2140	3531.2	1.65	1.02			166	491.7	2.96	1928	2934.8	1.52	1.95	128	3.20	443	7.97	.40	
TOTAL ^a	3053	2329.0	.76	7852	9501.1	1.21	.63			3157	2720.3	.86	8543	11067.8	1.30	.66	1438	1.62	2286	4.16		

Source: *Annual Report on Government Patent Policy* (June 1966), Federal Council for Science and Technology.

^a Exclusion of CIA

A = Government employee disclosures for 1964

B = 1963 intramural R&D obligations in millions of dollars

C = Government contractor employees disclosures 1964

D = 1963 extramural R&D obligations in millions of dollars

E = Government employee disclosures for 1965

F = 1964 intramural R&D obligations in millions of dollars

G = Government contractor employees disclosures 1965

H = 1964 extramural R&D obligations in millions of dollars

I = 1965 patent applications based on government employees disclosures

J = 1965 patent applications based on government contractors disclosures

the product of R&D expenditures in that year—but rather such expenditures in prior years. With that in mind in Table 2 we have related the number of disclosures in 1964 to R&D obligations given for 1963, and disclosures in 1965 to obligations in 1964 in million dollars. We have also shown the dollar obligations per patent application by relating such applications for 1965 to R&D obligations for 1963.

As one would expect, they show wide variations for the different agencies and in general much higher costs by contractor per disclosure or patent application as compared with comparable costs by government employees. Thus for 1964 disclosures the range is from 4.12 million dollars (column 4) per disclosure for HEW to \$120,000 for TVA; for NASA, the value is \$750,000, about the same as the average for all governmental employees in all the departments, \$760,000. This indicates a range of 4.12/0.12 or 34-fold difference. For contractor disclosures for the same year, the obligation dollars per disclosure ranges from \$12.1 million for Commerce to \$590,000 for the Navy, or a range of 21-fold (note the range is higher among employees). The average for contractors is \$1.21 million, or not quite twice that shown for employees. Variability is high between the departments for both employees and contractors and there is little relationship between column 4 and column 7.

In columns 16 through 20 the R&D obligations of each department for 1963 are related to the patent applications of that department in 1965. Again separate estimates are made for government employees related to R&D obligations for intramural work and patents filed on contractor disclosure to extramural obligations for R&D. For employees the range is \$14.64 million for HEW to \$420,000 for TVA, with an average of \$1.62 million. For contractors the range is \$20.98 million for NASA to \$1.18 million for the Army, with an average of \$4.16 million per application. This wide disparity would suggest that the things we are trying to compare are perhaps hardly comparable except for some common labels attached to them—or one might say in spite of the common label attached to them. It is also plausible that in the out-of-house research some of the expenditures even though labeled R&D are actually for supplies and equipment—which is ignored when employee productivity is measured in terms of disclosures or patents. Without more first-hand knowledge of what these governmental agencies get from various contractors it may be risky to relate productivity of dollars to disclosures and patents and arrive at any firm generalizations.

Professor Solo cites the work of Freeman, apparently what Freeman has done for Electronic Capital Goods is the same type of thing that

this commentator did using the entire list of contractors who supplied information to the Senate Subcommittee on Patents, Trademarks, and Copyrights coming to identical conclusions.¹⁸ The 12-to-1 ratio 9000/760 is essentially what this commentator obtained in an earlier analysis with respect to all government R&D expenditures whether intramural or extramural, compared with industry's expenditure of R&D. Speaking of comparative number of patents issued this commentator observed:

Assuming the 32,000 is correct, [number of patents issued 1946-1959] as the number of patents having resulted from federal R&D expenditures, the comparison should be made between this figure and the number and proportion of patents assigned on or before the date of issue to corporations. This number for the period 1946-1959 is 284,400. Thus corporations whose outlays for R&D were about 40 percent accounted for 284,400 patents and government with 53 percent of R&D expenditures accounted for 2,000. This yields a ratio of 12:1 between corporate R&D expenditure per patent as compared to government expenditure for R&D per patent.¹⁹

In the second article, based on the Department of Defense material partially used by Freeman, this commentator demonstrated the relationships summarized in Table 3.²⁰

TABLE 3
COMPARATIVE APPROXIMATE PRICE TAGS FOR PATENTS FROM FEDERALLY PROVIDED AND INDUSTRY SUPPLIED R&D DERIVED FROM THE INFORMATION SUPPLIED BY THE 78 COMPANIES

Source of Money	In \$1,000,000		
	Per Patent Application	Per Patent Issued	Per Patent Application Pending
Government R&D	1.792	3.702	4.235
Industry R&D	.163	.288	.575
Ratio of Gov./Ind.	11/1	13/1	7/1

These are consistent with Freeman's findings which are based on a portion of the Defense Department's experience, as well as with the global federal experience compared with private companies for the 14-year period, 1946-1959.

¹⁸ Freeman, C., "Research and Development in Electronic Capital Goods," *National Institute Economic Review* No. 34 (November 1965).

Sanders, B. S., "Comparative Yield from Government Versus Industry Financed R&D," *IDEA*, Vol. 9, No. 1 (Spring 1965) pp. 1-24.

¹⁹ Sanders, B. S., "What Should the Federal Government's Patent Policy Be?," *IDEA*, Vol. 8, No. 2 (Summer 1964), pp. 168-198. (P. 172)

²⁰ Sanders, B. S., "Government Versus Industry Financed R&D," *IDEA*, Vol. 9, No. 1 (Spring 1965), p. 19.

The relationship between disclosures, which Professor Solo labels inventions, from government-supplied R&D to patent applications might be derived from the *Annual Report on Government Patent Policy*. On the basis of this report some of the figures found in Professor Solo's Table III seem to be in error. For instance in 1963 and '64 patent applications filed by AEC are 556 not 551, for the Army, 1842 and not 1037, for the Navy, 2587 and not 1518, and for the Air Force, 1707 and not 1508. These discrepancies for defense agencies result from the fact that Professor Solo included all the disclosures but failed to include in his patent applications the applications filed by private corporations—which seems hardly appropriate.

Furthermore, in comparing the conversion of disclosures into patent applications the question of timing is essential, otherwise the comparison may not have full significance. This is especially important in comparing the conversion ratio for NASA employees with NASA contractors. We have shown for instance that disclosure by contractor employees was rising very rapidly while that from NASA employees was actually declining. Another consideration is that where patenting is by government, costs are given little if any consideration, this is not the case if the company has to pay for it. Also it is possible that often in order to patent considerable time is needed from the employees who made the invention. Contractors may be reluctant to allow such unproductive time to the employee while the government may have very little or no restrictions. Furthermore, when the contract is completed the employer has every right to prohibit his employees from spending more time to assist the patenting of disclosures which resulted from an earlier contract. Finally there is the possibility that government decision to patent employee disclosures may come from internal pressures which may not have any meaning for disclosures of contractor employees. These are possible factors which could contribute to the 5-to-1 differential in patenting for NASA employee disclosures when compared with contractor employee disclosures. A higher turnover in contractor employees, as compared with that of government employees with greater job security, could be another contributory difference both in the number of disclosures and in the proportion of these for which a patent application is filed.

With respect to ratios given in Table III, if the disclosures of 1963 and 1964 are related to the patent applications of 1964 and 1965, respectively, the ratio of inventions to applications which we obtain for the agencies shown in Table III given by Professor Solo are as shown in Table 4 below.

With respect to differential rate of patenting between employee

TABLE 4
PROPORTION OF THE NUMBER OF DISCLOSURES TO NUMBER OF PATENT
APPLICATIONS FOR SELECTED GOVERNMENT AGENCIES

Agency	Ratio of disclosures per application	
	Sanders ^a	Solo ^b
AEC	5.55	6.08
NASA	5.60 ^c	6.17 ^c
Army	1.67	3.47
Navy	2.12	3.41
Air Force	3.90	3.54
Combined	2.84	—

^a Sanders using fiscal year 1963 and 1964 disclosures relating these to 1964 and 1965 patent applications filed as given in *Annual Report on Government Patent Policy* (June 1966). It should be observed that the ratios will become more favorable to contractors if the interval was assumed to be two years rather than one—two years might be more accurate.

^b Taken from Table III of Professor Solo's article p. 167.

^c The figures are not comparable since Professor Solo uses disclosures and patent applications for the entire period of 1958-1965.

disclosures and contractor disclosures, the results which we obtain based on statistics given by the Federal Council for Science and Technology are summarized in Table 5.

On this basis the contrast instead of being 2.91 to 10.1 or 3.5-fold is 2.6-fold, somewhat less striking. Moreover this excess is not true with

TABLE 5
COMPARATIVE RATIO BETWEEN THE NUMBER OF DISCLOSURES PER PATENT
APPLICATION FOR GOVERNMENT EMPLOYEES AND CONTRACTORS*

Agency	Employees	Contractors	Ratio
AEC	7.75	5.52	.71
NASA	3.36	8.69	2.59
Army	2.17	1.36	.63
Navy	1.76	2.42	1.38
Air Force	1.87	4.34	2.32
Combined	2.09	3.24	1.55

* Using fiscal year 1963 and 1964 disclosures relating these to 1964 and 1965 patent applications. These ratios again will become more favorable to contractor employees if the time lapse between disclosure and patent application was assumed to have been two years which might be closer to reality as far as contractor disclosures are concerned.

all the five agencies. In two of them, AEC and the Army, the patenting ratio is actually higher for contractor disclosures as compared with employee disclosures. For the five agencies combined the number of disclosures per patent application is lower for contractor employees, 2.09 against 3.24, or a ratio of 1-to-1.6, about one-half of the differential indicated by Professor Solo for NASA.

We fully concur with Professor Solo's conclusion that:

All of these gaps of greatly varying magnitude between the rates of invention and the rates at which inventions are patented underline the *danger of counting numbers of patents as an omnibus index of inventive activity*.²¹ (Emphasis added.)

We also agree fully with Professor Solo in his analysis and conclusion regarding the senselessness, as a rule, for government to go through the motions of actually taking out a patent and throwing it open to any one to practice the invention—publication would be sufficient in most circumstances. But, of course when it comes to the argument of relieving the Patent Office of this extra burden one must not forget that government patent applications are relatively small—2,140 in 1965 out of a total of 100,421, i.e. about 2 percent. The relative insignificance of government-owned patents in relation to government R&D is not always appreciated in certain quarters.

With respect to the low commercial utilization rate of patented inventions resulting from government's patenting, the Patent Utilization Study was the first to indicate this; we had 17 federal patents in that sample.

Inspection of Table IV indicates again no allowance is made for some time lapse between the time when waiver was granted and the time when commercial use would have been reported. It is said that inquiry is sent to licensee a year after the waiver is granted—(footnote 3 to Table IV). It is possible that in many instances the time required for commercial exploitation could be longer. Since a relatively large proportion of waivers, 66, occurred in 1964, it is possible that at least some of the commercial use from these 66 waivers may not be reflected in the statistics cited. Therefore the percentage of utilizations might be as large as 7, but no higher. We concur, of course, with Professor Solo that the vast outlays could not be rationalized on the basis of the usefulness of these few patents.²²

²¹ *Supra* footnote 1, p. 168.

²² With respect to the number of waivers utilized Professors Watson and Holman report 23 in commercial use. Of these, two are held by individuals and 21 by corporations. They therefore observe: "The replies to the waiver questionnaire show that 21 of the inventions are in the stream of commerce. This is 11.5% of the total

Of the non-waived patents and patent applications of NASA, a total of 836, only 48, or 5.7 percent, were licensed. The licensees were questionnaired and the returns indicated: "Only one minor instance of commercial application was reported."²³

If we limit ourselves to the 48 inventions the utilization rate would be 2 percent, but if we relate it to the total number of inventions, 836, which one could justify, the utilization ratio becomes 0.1 percent which is highly inconsistent with the presumed findings of Professor Holman that commercial utilization rate of federally owned patented inventions was 10 to 15 percent.²⁴ This commentator in a previous interim report has suggested the probable unreliability of commercial use reported by inventors in Professor Holman's inquiry, since utilization ratio of all federally owned patents that could be derived from licensee's replies gives a much lower ratio about, 2 to 3 percent—unless one assumes unknown large scale use of unlicensed government-owned patented inventions which seems improbable.²⁵ Professor Solo's study tends to corroborate the suggestion that:

It would appear much more plausible, therefore, to assume that the true commercial utilization rate of these government-owned patented inventions was substantially lower than 15 percent, perhaps as low as 2.5 and not likely over 5 percent. . . .²⁶

of waivers granted as of the end of 1965." Watson, D.S., and Holman, M.A., *supra* footnote 5, p. 68.

An intermediate number between the figures given by Professor Solo as against those given by Watson and Holman is given to this commentator by NASA officials who canvass these companies annually regarding the commercial use of these waivers.

²³ *Supra* footnote 1, p. 176.

²⁴ Holman, M. A., "The Utilization of Government-Owned Patented Inventions," *IDEA*, Vol. 7, No. 2 (Summer 1963), pp. 109-161. See specifically Table II, p. 154 showing 14.6% used, based on inventors reply. See also *IDEA*, Vol. 7, No. 3 (Fall 1963) for continuation of the same report, pp. 321-395, especially Table 15, p. 323, showing 19.4% of government-owned patents used by licensees.

²⁵ *Supra* footnote 19, especially pp. 176-186.

²⁶ *Ibid.* p. 186. In the Patent Utilization Study 16% of the replies of inventors of assigned patents as to the utilization of the sampled patent was "don't know." Professor Holman shows no unknowns—which is surprising since government employee inventors are less likely to know if a patented invention of theirs assigned to the government is being used by some private company. The report that 75% of these employee patents were being used by the government also reflects such overstatement. This commentator has been advised by NASA that their total patentable inventions to date (4/20/67) number 664. Of these, 251 are said to be in actual operational use; 197, in mock-up stage (some of which would undoubtedly go into operational use); 129 not likely to be reduced to practice; 20, no use to be made; 22, possible external use but no use in current experimental area; and 44, unknown whether any use could be made. On the basis of these statistics we estimate roughly 50% utilization of these NASA-held inventions by the agency

In fact the findings of Professor Solo, as quoted at the inception of this commentary, are more disparaging as far as the so-called spin-off values from federal R&D in terms of patentable inventions used commercially are concerned, than that of any prior empirical study of this type. In this connection we have a question. In our quotation (from p. 175) Professor Solo refers to "more than 2600 inventions by contractor employees," we do not know how this number was obtained. On page 159 Professor Solo has indicated the total number of inventions, actually disclosures, by contractor employees from 1958 through 1965 was 4775. The Federal Council for Science gives 1,526 disclosures for NASA from its contractors for 1965. The sum of 2600 and 1,526 is 4126 and not 4775. It may be said, in general, throughout the article the term invention is used rather loosely, it is not always clear whether it refers to disclosures, to patent applications or to patents granted. Also in the portion quoted from page 175, it is not clear whether the six inventions that are reported used are among the seven shown in Table IV as used (particularly since the footnote states that if one includes a kit of brazing tools, the number of disclosures used would become ten). Moreover, footnote 2 in Table IV makes it appear that 160 are patents or patent applications and not disclosures—or perhaps a mixture, which is confusing.

Conclusion regarding the negligible contribution that NASA's R&D has made to civilian non-space economy is presumably based on data summarized in Table IV showing the number of waivers since 1959 and the number of these reported in commercial use. With respect to those in which government took title, of 836 patents or patent applications (again a mixture) only 5.7 percent were licensed. With respect to these licensed ones it is said:

In December 1965, a letter survey was made from the Office of the NASA General Counsel to determine the extent to which the licensed inventions had been commercially applied. Eventually replies were forthcoming from about half of the licensees. Considering the character of the licensee in a situation where a license could be obtained by anyone at the cost of a postage stamp, these who replied to repeated solicitation, probably constituted substantially all of those who might seriously have intended to develop the licensed invention for commercial use. Only one very minor instance of commercial application was reported.

Thus the effort to transfer technology by offering inventions for non-exclusive, royalty-free licensing has been as sterile of benefits to the economy as have been the efforts to promote the transference of

itself. This is materially lower than the only such figure known to this commentator, 75%, given by Professor Holman. How the 664 is related or could be reconciled with 836 cited by Professor Solo is not clear.

invention through granting exclusive commercial rights to R&D contractors.²⁷

After these assertions Professor Solo goes on to say:

They [his findings on patent obligation] are consistent with the findings of Professor Donald Watson [who found a utilization ratio of 13 percent] in his pioneering efforts, and with those of his colleagues, particularly of Professor Mary Holman, [who alleged 14.5 percent based on inventors' return, and 19.4 based on licensee reports] at The George Washington University, as well as with the work of the Senate Subcommittee on Patents, Trademarks and Copyrights covering the patent practices of the Department of Defense and other Government agencies.²⁸

While in a general qualitative sense these different studies come to similar conclusions, their specific quantitative findings are widely different and it seems misleading to say that they are consistent. With respect to percentage of contractor-owned patents put to commercial use, Watson and associates sent questionnaires to 102 companies and other organizations holding title to 298 patents which had resulted from government R&D. Of these, returns were received with respect to 143 patents. Of these 19, or 13 percent, had been developed subsequently for commercial use.²⁹

We find no data given by Professor Solo which would indicate such a high proportion of patented inventions in which the contractor had title that were put to commercial use. The highest percentage one could infer from Table IV would be about 7 percent; actually on the basis of figures given it is 4.4 percent, 7/160, which is markedly different from Watson, *et al* findings. The difference is large, and if one assumes the samples studied approximate some sort of random sample, they would seem statistically different in use ratio.³⁰

This inconsistency would be even more true when one compares the findings of Professor Solo with those of Professor Holman. For licensees, Professor Holman found 19.4 percent were reported used, while the figure given by Professor Solo would be about 2—in any event less than 5; no actual percentage is given. Furthermore if one relates the licensee replies on use to the total number of patents and patent

²⁷ *Supra* footnote 1, p. 176. I would say more sterile by comparison with patents to which government title was waived.

²⁸ *Ibid.*, p. 177. These are references to earlier works of Professors Watson and Holman while working for The PTC Research Institute.

²⁹ Watson, D. S., Bright, H. F., and Burns, A. E., "Federal Patent Policies in Contracts for Research and Development," *PTC J. Res. & Ed. (IDEA)* Vol. 4, No. 4 (Winter 1960), p. 324.

³⁰ The observed difference in the two percentages is 2.8 times the standard error of the difference.

applications, the percentage from Professor Solo would be about 0.1 percent while that from Professor Holman yields 2.5 percent. Finally, according to Professor Holman, of 11,674 patented inventions to which the government had title, 1,487 were licensed, i.e. 12.7 percent, while the percentage of licensed patents for NASA is 5.7. These figures are not comparable, and their non-comparability could prove significant even though they all corroborate the general theses that if patented inventions are any measure of the value of federal R&D then we are wasting our national resources on a grand scale—which could be the case. But this does not mean that these different studies are internally consistent in their specific quantitative finding. As we have emphasized from the beginning, Professor Solo's statistics, which according to him are by far the best worked out, give results much more damaging to any allegation of useful spin-offs from government-supplied R&D in terms of patented inventions.

Even the finding of the Senate Subcommittee for Department of Defense patents in which the contractor retained title—while significantly lower than that found by Professor Watson and his associates—is higher than that obtained by Professor Solo. Since there is little if any room for sampling errors in the work of Professor Solo, in that he is using essentially the entire universe, the higher percentages obtained by Watson, Holman and the Senate Subcommittee could suggest nonrepresentativeness of their samples, or more appropriately, of that portion of the sample that returned questionnaires. Another possible way to explain these differences would be that perhaps DOD and other agencies which gave title to the contractor—especially prior to the 1963 Presidential Directive—had a higher proportion of commercially useful patents than agencies which as a rule retain title from the contractor. Another possible differential could be the technology in which NASA is involved as compared with technologies of DOD and other government departments, all of these factors and possibly others could contribute to the large differences which Professor Solo seems to gloss over at least in the first instance.

As we have pointed out, Professor Holman's findings are in themselves internally inconsistent, suggesting the unreliability of inventor replies as to the utilization status of his inventions. If this is correct, then the high percentages reported of government use of its own patented inventions would also become questionable. Such figures as we have been able to secure from NASA seem to substantiate this inference, suggesting a utilization rate of around 50 percent. (See footnote 26).

It is true that after citing the findings of prior studies Professor Solo

does indicate that his NASA findings indicate much lower commercial utilization, but this comes more as an afterthought.

PART III

Having established, with a larger body of data and data alleged to be of higher reliability, that as far as commercially useful patents are concerned, government's contribution through R&D is nil, as things stand, Professor Solo takes upon himself the task of the alchemist to change this unproductive activity into a productive endeavor. This is the purpose of Part III.

Even though Parts I and II dealt with inventive activity of both government employees and contractors showing non-productivity of inventions from both, the remedies prescribed in Part III are restricted to contractor employees only.

The real issue is not raising the proportion of inventions reported but raising the quality—in terms of contribution to civilian economy. Nowhere has Professor Solo shown that NASA has any such competence. In fact he admits in his analysis that he has not gone into this much more important phase of quality; yet he is not reluctant to offer broad recommendations without any empirical evidence as to their merits or workability.³¹

The primary purpose for Government R&D could not be inventiveness per se; if it were, then it should be discontinued since the evidence even though meager seems unmistakable that this is no effective way to invent. Cease and desist should be the order, not adding new agencies and new requirements. It would seem company money as well as money from individuals is taken in taxes, then ways are thought of how to use this money effectively to generate more inventions. When we find that the money given back to companies is not used as efficiently as the money which was not taken away from them, it would seem the sensible thing would be to leave the money with the companies to begin with.

The first recommendation is that employees working for government R&D contractors report their inventions directly to a governmental agency. Government employees report directly to the agency, but Professor Solo has not demonstrated adequately that their inventive output in terms of useful patents is significantly greater than that from

³¹ As far as number of disclosures are concerned there has been a progressive increase in these from contractors and a decline as far as employees is concerned. Professor Solo fails to bring this out and try to explain the implications.

contractor employees'—yet he is not reluctant to destroy organizational solidarity and have these employees report their disclosures directly to NASA instead of through the appropriate company channels.

To make such reporting practical, government has to establish offices with different contractors, and the activities of these offices in many instances are likely to disrupt the smooth operation of the contractor thereby hampering further the efficiency of concerns working on government contracts. Part of this will result from the fact that the more efficient companies would be even more reluctant to take on government contracts than they are now. Moreover, these offices would add further to government's operational costs, resulting in higher taxes, lower productivity, and no evidence of any true increase in economically useful inventions.

The second recommendation is that of using inventiveness of corporations as a basis of offering a contract. The evidence presented by Professor Solo on economic usefulness of NASA patents vis-à-vis other fragmentary findings would seem to suggest that productivity of useful patented inventions under NASA is lower than that under other agencies. Could it be that this is because NASA has tried in some measure to implement the ideas espoused by Professor Solo? In this connection it is said:

Thus much might be accomplished with a very small effort by NASA. If contractors feel obliged to present and justify (and hence be induced to develop) their creative credentials, that itself would be most salutary.³²

The procedure recommended, despite what is said about not costing much, would be cumbersome and costly and of dubious effectiveness to really measure comparative inventiveness of various competing firms. It is like using a steam shovel to pick up a butterfly from a flower.

Professor Solo is unconvincing to one who has known how the government operates when he says without any basis in fact;

Creative capabilities might be related to particular fields of endeavor. And the survey might seek to cover not only R&D contractors, but also those currently outside the R&D establishment who might later be brought into it.³³

The direct reporting of invention which was first considered is brought up again. Professor Solo seems to appreciate some of the difficulties when he first considers this matter; he writes:

³² *Supra* footnote 1, p. 187.

³³ *Ibid.*

Rather reports from inventors come to NASA through intermediaries who are motivated to minimize disclosure. This structural weakness probably cannot be easily and simply remedied. There are conflicts between the public and the private interest built into the Government-contractee private-contractor relationship that may not be wholly resolvable within its frame.³⁴

However, this concern is dissipated by the unfounded assertion:

It is not conceivable that such direct reporting of inventions would subvert any prerogatives required for effective management.³⁵

In fact, Professor Solo forgets all caution, recommending direct relationship between company inventors and NASA office, prizes and so forth—which would lead to complete disruption of contractor organization.

The third recommendation is some sort of welding of universities in an amalgam with government and private contractors to spread knowledge.

The fourth recommendation is the organization of an intra-governmental board to formulate standards for the disclosure of information on inventions produced through government-sponsored R&D—so as to give these disclosures the same prestige as patents—another costly new structure to save going through the patent route.

These recommendations are followed further by ideas about technologies as complexes of ways of purposeful action and ways to enable transference from governmental technology in to non-governmental fields. It is said in this connection:

Rather than by transfers *between* technologies, the significant social benefit from NASA-sponsored R&D, aside from the intrinsic values of space exploration, will be brought about through the extension of constituent technologies to encompass other activities, to serve new purposes, to service a different clientele. To promote such extensions of technology requires a different strategy of search and promotion than has prevailed hitherto.³⁶

We are told that to extend technologies successfully we need “champions of innovation.” Thus rhetoric replaces facts and logic. It is assumed without thinking of all the possible consequences, such as that NASA may assist some of these “champions” to become entrepreneurs in their own right. Here we have another duplication of Small Business Administration, the Office of Economic Opportunity and some other government agencies entrusted with this function.

³⁴ *Ibid.*

³⁵ *Ibid.* p. 188.

³⁶ *Ibid.* pp. 194-195.

In the face of the indifference shown by contractors in government-owned inventions it seems pointless to make recommendations like this:

It is immediately and concretely recommended that exclusive commercial rights on inventions waived to contractors should be promptly voided at the end of the time period stipulated by regulations unless there is by then clear evidence of significant commercial application or of a substantial expenditure on development for commercial application; and that all equivocation and ambiguity on this point be removed. It is likewise recommended that before any waiver of exclusive commercial rights on an invention is made to any large R&D contractor, there must be established in the operations of that contractor a competent group, whether a branch, or a department, or a division, or an office, or a subsidiary, not including the company's patent counsel, assigned the specific task of evaluating such inventions for their commercial potentialities, of developing such inventions and of promoting their commercial applications. It is useless to waive commercial rights to a company that has not organized itself to promote commercial applications. Further it is recommended that blanket waivers of commercial rights on all inventions made by R&D contractors be granted automatically whenever, and for so long a time as that company achieves a 20 percent or better rate of commercial application on the waived inventions in its possession. . . .³⁷

These recommended measures could lead to nothing more than higher government expenditures and less qualified R&D contractors with higher costs to the taxpayer for products derived from these contracts.

In passing, the author observes:

Significant change, however, will come about not through new regulations but by a different official attitude and promotional orientation. The powers exist and the powers could be sharpened, but those powers must be used aggressively and imaginatively with the objective of promoting innovation. . . .³⁸

Yet many of the proposals have been in terms of organizational changes from page 181 on. There is no indication whatsoever that the recommended changes would bring about the desired change in attitude.

Comparing NASA with DOD and AEC Professor Solo concludes:

Only NASA is mission-oriented to promote the general extension and commercial application of an unbounded range of technologies and related inventions produced through Government-sponsored R&D. NASA uniquely has developed an instrumentality for such generalized promotion and dissemination, the Technology Utiliza-

³⁷ *Ibid.* pp. 196-197.

³⁸ *Ibid.* pp. 197-198.

tion program. And, while certainly this has nowhere yet been accomplished, for NASA alone it is conceivable that the licensing and control of patented inventions could be deliberately used in a promotional strategy for encouraging the extension of technology and the transfer of invention.³⁹

We have seen that this "mission-orientedness" of NASA has not helped their patent picture at all—if anything both in patent production and in ratio of patents having general economic use, on the basis of statistics given by Professor Solo, DOD patents seem to be more valuable than NASA patents. This reality, however, has escaped Professor Solo. In fact, in the last two paragraphs, Professor Solo extends what he has been proposing for NASA to all governmental departments, concluding:

It is therefore recommended, not as a NASA but as a national objective, that all of the special-purpose technologies and related inventions produced through Government-sponsored R&D be brought within the scope of a rational and, where feasible, an integral control, in promoting their extension into new spheres of application and use.⁴⁰

We find no sound rationale for Professor Solo's recommendations to increase inventive output from government-supplied R&D. Instead we feel what is indicated is that as far as commercially productive inventions are concerned government supplied R&D is sterile and should be justified, if it can be, on other bases, and if not justifiable on such other bases, then reduced as rapidly as it is politically and economically possible and not proliferated.

CONCLUSION

Before concluding, some remarks on Tables I and IA (pages 200-206) seem important. The number of disclosures shown in Tables I and IA total 3,879, the number of waivers requested is 133, the number of waivers granted is 73 and the number of inventions reported in use only 3. These may be compared with the total universe of NASA contractor generated inventions. This is shown in Table 6.

Tables I and IA are said to include all corporate contractors and other organizations with a contract in excess of \$1,000,000 in 1965. It is said the business grants listed included over 90 percent of the R&D spent through business in 1965. It must be assumed therefore that the bulk of the remaining inventions (disclosures) are for companies who

³⁹ *Ibid.* p. 199.

⁴⁰ *Ibid.*

TABLE 6

COMPARISON OF STATISTICS GIVEN IN TABLES I AND IA WITH THE TOTAL
UNIVERSE OF DISCLOSURES, WAIVERS AND COMMERCIALY UTILIZED INVENTIONS

Total Universe	Inventions 1958-1965	Waivers Requested 1958-1965	Waivers Granted	Inventions Used 1958-1965
Total from all contractors	4755	N.A.	251	8 ^a
Contractors listed in Tables I and IA	3879	133	73	3
Difference	876	N.A.	178	5

^a Based on Table IV and licensee replies. Information limited to patents waived through December, 1964. If it is adjusted in terms of 160, the number could increase well beyond 12 by taking into consideration waivers granted in 1965 not included in Table IV, and utilization in 1965 of waivers granted in prior years.

were not among the grantees in 1965. It would appear that these companies which are not among the 1965 grantees had a higher proportion of inventions waived to them and a higher utilization ratio, 3/3879 as against 5+/876. No reference is made to this seeming selectivity. Could it be that interference by NASA as it is now even without the greater interference recommended by Professor Solo has been driving away some of the more productive contractors? This is a possibility in line with another bit of evidence in an earlier interim report by this commentator, based on analysis of patent productivity of the 78 companies with defense contracts who returned the Senate Subcommittee questionnaire. In that connection the evidence led to the conclusion that in terms of patent productivity from company-financed R&D these 78 companies did not seem the preeminent companies. It was observed that:

This contrast is perhaps highly significant. These relationships suggest that the 78 companies getting the lion's share of federal R&D, perhaps, do not represent the most skilled companies of the land—companies which would have the highest patent yield per unit of R&D dollar. They suggest that these most efficient companies, perhaps, do not seek, and actually may avoid getting involved in federally financed R&D contracts. Therefore, in our analysis, we may be excluding some of the most efficient corporations, i.e. corporations with the highest yield from their own R&D expenditures. If this inference is correct, it could have very significant implications for the country regarding the economic value of federally financed R&D grants.⁴¹

⁴¹ Sanders, B. S., "Comparative Patent Yields from Government Versus Industry Financed R&D," *IDEA* Vol. 9, No. 1 (Spring 1965), pp. 10-11.

The frequencies of disclosures given for specific companies in Tables I and IA are often inconsistent with figures in a similar table presented by Watson and Holman. Only 63 agencies are found in both tables. Of these, in four, the number of disclosures given by Professor Solo is somewhat higher. In the aggregate the number of disclosures attributed to these four contractors by Professor Solo is 1010 disclosures, while the corresponding number reported by Watson and Holman is 1001. In 15, the number of disclosures as reported by Professor Solo are smaller than that reported by Watson and Holman, the aggregates being 941 and 1038 disclosures. For the remaining 44, the frequencies of disclosures are the same. However, for seven other contractors Professor Solo gives frequencies of disclosures, aggregating 61 disclosures which do not appear at all in the list of contractors given by Professors Watson and Holman.

Without going to the basic information, we cannot resolve these and other discrepancies except to add that the staff of NASA regards the factual data given by Watson and Holman as much more reliable.

STUDENT PAPERS

By making available student papers, students will receive an incentive and our readers will appreciate the evidence of scholarly development in the fields of interest. These papers are carefully reviewed by the Editorial Committee and other specialists, and helpful suggestions are made to the students as part of the educational function of *IDEA*. The Research Institute invites educational and research institutions to submit informative student manuscripts on the patent, trademark, copyright, and related systems.

Recovery in Patent Infringement Suits*

THOMAS J. HOFFMANN

SUMMARY

MUCH DISCUSSION AND ATTENTION has been devoted to the quagmire of legal principles surrounding the patent system. Too often ignored is the patent system's economic foundation.

The patent system is designated "to promote the progress of science and useful arts"¹ by providing an incentive to invent. The incentive is the possibility of monetary reward to the inventor and to those who support him.²

A patentee expects to realize monetary rewards by making, using or selling his patented process or product, and/or by assigning or licensing his patent. Another manner of realizing monetary reward is

* This paper was submitted in fulfillment of the requirements of a course in Legal Writing conducted by Professor L. James Harris in The National Law Center of The George Washington University.

¹ U. S. Const. art. I, §8, Cl. 8.

² *Report of the President's Commission on the Patent System* (Washington, D.C.: G.P.O., 1966), p. 2.

recovery in a civil action for infringement of a patent.³ This paper will discuss money, i.e., the recovery awarded in patent infringement suits.

INTRODUCTION

PRIOR TO 1946 there were two principle elements of recovery in infringement suits:

- (a) "damages," the money which the patentee loses due to the infringement;
- (b) "profits," the money the infringer makes due to the infringement.⁴

In 1946 the provision of the U.S. Statutes providing for recovery was amended.⁵ Since 1946 the courts have been embroiled in controversy over the legislative intent embodied in the amendment.⁶

The question under consideration is: May a court under 35 U.S.C. 284⁷ still award to the successful patentee a sum equal to the amount of money made as profit by the infringer, that is, "profits?"

The attitude of the courts has been changing since the 1946 amendment, drifting away from the award of profits, and has culminated in the recent decisions of *Aro Mfg. Co. v. Convertible Top Co.*⁸ by the Supreme Court (hereinafter referred to as *Aro II*) and *Georgia Pacific v. United States Plywood*⁹ by the Southern District Court of New York (hereinafter referred to as *GP v. USP*). A serious problem is the lack of an effective dialogue to accompany this evolution. In 1947 it was noted that the social and economic implications of the rule

³ 35 U.S.C. 284, 285.

⁴ R.S. 4921, as amended, 42 Stat. 392; *Aro Mfg. Co. v. Convertible Top Co.*, 377 U.S. 505, 141 USPQ 693.

⁵ Act of August 1, 1946, C. 726 1, 60 Stat. 778, 35 U.S.C. (1946 Ed.) 67, 70.

⁶ 72 *Harvard Law Review* 345, note 126.

⁷ 35 U.S.C. 284 reads in part:

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty, together with interest and costs as fixed by the court.

⁸ 377 U.S. 476, 141 USPQ 681 (June 8, 1964).

⁹ 243 FS 500, 146 USPQ 228 (June 15, 1965).

of damages was deserving of serious consideration.¹⁰ That consideration has not been forthcoming.

The manner in which the statutory provision relating to recovery was amended in 1946 shows the legislative process at its worst. Scant attention or publicity was given to the amendment before it was adopted.¹¹ The legislative history is fraught with ambiguities.

The 1952 revisioners claimed only to have reworded the statutory provision relating to recovery but by the rewording process they aided considerably in the evolution away from the award of profits.¹²

The courts in the 1950's were undecided about the inclusion of "profits." The case decisions held both ways¹³ and no clear rule emerged. Confusion reigned.¹⁴

The absence of a clear rule may have been one reason why four Justices of the Supreme Court felt compelled, though the subject had not been briefed or argued, to turn their attention to the subject of recovery in *Aro II*. The Justices held, in what must be considered *obiter dictum*, that profits are excluded. The Court could have decided either way; yet it set what has been interpreted as major precedent¹⁵ without setting forth the social and economic policy which governed their choice. They chose instead to rationalize their decision by citing supporting parts of the preceding controversy.

It is now the duty of the Patent Bar not only to examine the remarks of the Supreme Court but to formulate a policy which will either support or refute the position of these four Justices. Advice must be given to the legislature and the courts, for neither has heard what effect their decisions may have upon the progress of science and the useful arts.

The remarks of the four Justices in *Aro II* are not the last word. The case can be distinguished, for it involved a specialized fact situation encompassing a plethora of factors which renders the case almost incomprehensible. The lower courts are not bound by the remarks of the minority of Justices. However, the key phrases are

¹⁰ 29 JPOS 832, note 82 (November 1947).

¹¹ 29JPOS 148 (February 1947). An investigation of the House and Senate files concerning the 1946 Amendment on file in the National Archives revealed that prior to passage in the House there was no publicity and that while prior to Senate passage, interest was building but no public hearings were conducted. The 20 to 30 pieces of mail show support and opposition as about evenly divided.

¹² *House of Representatives Report No. 1923*, 82nd Cong., 2d Sess. pp. 10, 29; and *GP v. USP*, 243 FS 520; 146 USPQ 245, 246.

¹³ *GP v. USP*, 243 FS 531, 146 USPQ 254.

¹⁴ *Lockin v. Switzer Bros., Inc.*, 235 FS 904, at 907, 143 USPQ 233 at 235.

¹⁵ *GP v. USP*, 243 FS 541-542, 146 USPQ 263.

there and may be plucked from their environment and replanted as dogmas of the law.

The question was discussed prematurely.¹⁶ It will be presented to the Court again. The remarks in *Aro II* are a good indication of what decision the Court will make in the future unless a cogent argument persuades it otherwise or unless new and unambiguous legislation is forthcoming.

Section I of this paper will be devoted to an extensive examination of the views of Justices Brennan, Stewart, White and Goldberg of the United States Supreme Court regarding the award of damages in a patent infringement suit as expressed in the case of *Aro Mfg. Co., Inc., et al v. Convertible Top Replacement Co., supra*.

Section II will examine the effect that *Aro II* should have and has had on the lower courts.

Section III will attempt to examine the social and economic effect of the inclusion or exclusion of the award of profits and will propose remedial action.

SECTION I

Part IV of the *Aro II* case¹⁷ is preceded by a footnote:

This part of the opinion expresses the views of Justices Brennan, Stewart, White and Goldberg. Mr. Justice Harlan considers that the matters here dealt with are not ripe for decision and should be left for determination in the future course of this litigation.

The opinion of the Supreme Court was delivered by Justice Brennan. It was presented in four parts, two parts representing the views of five members of the Court and two parts representing the views of four members of the Court.

In this discussion I am not concerned with the effect of Part IV upon the lower court on remand, but wish to examine Part IV with the care and intensity due any statement of our highest court, and as predictive of future action to be taken by the Court. Discussion of what effect these views should have on the lower courts will be retained for Section II of this paper.

Convertible Top Replacement Co., Inc., (CTR) acquired by assignment from Automobile Body Research Corporation (AB) all rights for the state of Massachusetts in a U.S. combination patent covering a

¹⁶ *Aro II*, 377 U.S. 502, note 18, 141 *USPQ* 692.

¹⁷ 377 U.S. 502-513, 141 *USPQ* 692-697. Quotations from the Supreme Court opinion will be set off in bold face.

convertible top structure. General Motors and Ford produced cars having the patented top from 1952-1954. GM was under license from AB; Ford produced as an infringer, not having a license.

Aro was not licensed and produced fabric replacements for the patented car tops. CTR brought action in 1956 against Aro for infringement and contributory infringement for Aro sales covering use in both GM and Ford cars. The District Court for the District of Massachusetts¹⁸ found the patent valid and infringed. The Court of Appeals for the First Circuit¹⁹ affirmed and the Supreme Court reversed²⁰ ("*Aro I*"). *Aro I* dealt only with GM and not with Ford cars.

On remand the District Court²¹ dismissed the action against both GM and Ford cars. The Court of Appeals²² reversed and reinstated the judgment in favor of CTR as against Ford produced cars.

Ford obtained a release for its infringement from AB for \$73,000 on July 21, 1955. It was the intention of the agreement not to release or license any persons other than Ford and its customers, and in particular the parties did not intend to release or license contributory infringers like Aro.

In Part I of the opinion the court found that Aro sales of replacement fabrics for unlicensed Ford cars fell squarely within the statutory definition of contributory infringement. In Part II the court decided that after the agreement between Ford and AB, Ford's customers were licensed and therefore could not infringe by repairing the patented structures, and therefore Aro could not contributorily infringe. CTR could not by way of the agreement extend its monopoly to unpatented replacement parts. Thus, Aro is not liable for sales after the agreement. Part III found that the release of Ford with regard to past infringement did not preclude a subsequent suit against the contributory infringer if full satisfaction had not been received.

Part IV of the opinion concerns only pre-agreement contributory infringement. The Court restates the conclusion arrived at in Part III. Full compensation of AB by the direct infringer for prior infringement would preclude recovery of any award from the contributory infringer, Aro. The court must then consider whether the payment by Ford to AB constituted full payment for the infringing use.

This depended upon the measure and total amount of recovery to

¹⁸ 119 USPQ 122.

¹⁹ 270 F2d 200 (1959), 122 USPQ 536.

²⁰ 365 U.S. 336 (1961), 128 USPQ 354.

²¹ Not reported.

²² 312 F2d 52 (1962), 136 USPQ 9.

which CTR and AB were entitled. CTR assumed that a judgment holding Aro liable for contributory infringement would result in recovery of a royalty from Aro on the infringing sales of replacement fabrics.²³

The Supreme Court disagreed:

This is the assumption with which we disagree. It is our view that despite our affirmance of the judgment against Aro as to sales made before the agreement date, no such royalty will be available to CTR as part of its recovery. We are, indeed, doubtful that CTR can properly be allowed recovery of anything more than nominal damages from Aro.

It should be noted that CTR was assumed to be asking only for a *royalty* by way of recovery and not for profits. One should be aware of the manner in which the Court reaches the issue of profits.

The Justices then discuss the amount of damages available to successful patentees in infringement suits, referring to 35 U.S.C. 24.

It is presumably the language "in no event less than a reasonable royalty" that has led to the assumption noted above. But that assumption ignores the fact—clear from the language, the legislative history, and the prior law—that the statute allows the award of a reasonable royalty, or of any other recovery, only if such amount constitutes "damages" for the infringement. It also ignores the important distinction between "damages" and "profits," and the relevance of this distinction to the 1946 amendment of the statute.

In patent nomenclature what the infringer makes is "profits"; what the owner of the patent loses by such infringement is "damages." *Duplate Corp. v. Triplex Safety Glass Co.*, 298 U.S. 448-451, 29 USPQ 306, 308.

Profits and damages have traditionally been all-inclusive as to the two basic elements of recovery. Prior to 1946, the statutory precursor of the present 284 allowed recovery of both amounts, reading as follows:

"(U)pon a decree being rendered in any such case for an infringement the complainant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby***." R.S. 4921, as amended, 42 Stat. 392.

Revised Statutes 4921, pre-1946, concluded, "the court may adjudge and decree the payment by the defendant to the complainant of a reasonable sum as profits or general damages for the infringement."

²³ AB's counsel asserted on deposition: "I believe we would have the right to arrive at royalty and otherwise consider as patented the replacement top . . ."

When asked by the District Court at a hearing concerning a judgment bond how much he expected to recover, CTR's counsel replied: "I suppose a reasonable royalty would be 5%."

By the 1946 amendment, Act of August 1, 1946, C 726, 1, 60 Stat. 778, U.S.C. (1946 ed.), 67, 70, the statute was changed to approximately its present form, whereby only "damages" are recoverable.

The amended statute effective between 1946 and 1952 read in part:

(U) pon a judgment being rendered in any case for an infringement the complainant shall be entitled to recover general damages which shall be due compensation for making, using or selling the invention, not less than a reasonable royalty therefor.

The Court then recognizes that the stated purpose of the 1952 Codification was merely "reorganization in language to clarify the statement of the statute."

The post-1952 and present 35 U.S.C. 284 reads in part:

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty, together with interest and costs as fixed by the court.

The court summarizes:

The purpose of the change was precisely to eliminate the recovery of profits as such and allow recovery of damages only.

The Court quoted from the report accompanying the amendment:

"The object of the bill is to make the basis of recovery in patent-infringement suits general damages, that is, any damages the complainant can prove, not less than a reasonable royalty, together with interest from the time infringement occurred, rather than profits and damages." H.R. Rep. No. 1587, 79th Cong. 2nd Sess. (1946), to accompany H.R. 5311, at 2. [See also Hearings before the House Committee on Patents, 79th Cong., 2nd Sess., on H.R. 5231 (subsequently amended, reintroduced, and reported as H.R. 5311), January 29, 1946, e.g. pp. 2-3.]

There can be no doubt that the amendment succeeded in effectuating this purpose; it is clear that under the present statute only damages are recoverable. See, e.g., *Ric-Wil Co. v. E. B. Kaiser Co.*, 179 F2d 401, 407, (C.A. 7th Cir. 1950), cert. denied, 339 U.S. 958; *Livesay Window Co. v. Livesay Industries, Inc.*, 251 F2d 469, 471-472 (C.A. 5th Cir. 1958); *Laskowitz v. Marie Designer, Inc.*, 119 F Supp. 541, 554-555, (D.C.S. D. Cal. 1954); *Cullen*, 28 JPOS 838 (1946); *Wolff*, 28 JPOS 877 (1946).

The House Report, in addition to the section quoted in the opinion, points out the problems which the Committee members hoped to overcome with the 1946 amendment:

- (1) "the law's delay";
- (2) the difficulty of adducing convincing proof of necessary facts;

- (3) the impossibility of appropriating profits due to a patented improvement in a complex machine.

The Report concludes (emphasis added):

Although the bill would not preclude the recovery of profits as an element of general damages, yet by making it unnecessary to have proceedings before Masters and empowering equity courts to assess general damages irrespective of profits the measure represents proposed legislation which in the judgment of the Committee is long overdue.

When the Committee made its report on February 19, 1946, the resolution included the award of *costs*, reasonable *attorneys' fees* and *interest* from the time the infringement occurred. The Senate, without holding hearings, amended the resolution in its report of June 14, 1946, to make the award of costs, interest and reasonable attorneys' fees discretionary with the court.²⁴

Now let's examine the hearings held on January 29, 1946, by the House Committee on Patents. The testimony of Conder C. Henry, Assistant Commissioner of Patents, is most enlightening, for much of it is incorporated *verbatim* in the House Report.

On page 10, he states:

The only thing that this bill essentially does is to provide for general damages and to omit mention of the right and duty of the court to fix profits in cases where profits cannot be fixed.

I am not one who believes that this bill would prevent proceedings before Masters where profits are claimed as an element of general damages.

When asked "If [a party] were infringing and if he were an innocent infringer, he would be protected by the assessment of not more than reasonable royalties, is that correct?" Mr. Henry answered: "No, sir. General damages, not less than reasonable royalties, and an injunction." And:

I desire to say, and I desire to say it with all the force at my command, if the committee recommends, which I do not believe it will, and Congress adopts any bill that provides for the payment of only reasonable royalty for an infringement of a patent, whether the infringement is innocent or willful, it would amount to nothing more than a compulsory licensing system. This bill does not do that.

²⁴ The bill passed the House March 4, 1946, and passed the Senate in amended form July 17, 1946. The amendments were agreed to by the House July 24, 1946, and the bill was signed by the President August 1, 1946.

The Committee soundly defeated a proposal by the Department of Justice to substitute the words "reasonable royalty" for "general damages." This was an effort by the Department of Justice to bring about "greater uniformity among the courts."

It appears from the tone of the hearings, the language of the report, and the text of the bill itself, that Congress intended to allow a patentee who files a suit for patent infringement, an option as to asking for:

- (a) general damages which could be proved without an accounting before a Master;
- (b) general damages including profits which would require a hearing before a Master with all its inherent difficulties and delays.

The successful patentee would receive by way of compensation:

- (c) general damages excluding profits;
- (d) general damages including profits; or
- (e) a reasonable royalty.

This is done with the proviso that if (c) or (d) is less than (e) then the award shall be (e).

In any event, a court would always be forced to make a determination as to what constitutes a reasonable royalty and to award a sum equal to or greater than that determination. The complainants' decision to take or reject a reasonable royalty would depend on what he could prove, whether what he could prove would be worth the added expense of the accounting procedure, and whether the additional time required for an accounting was justified by the potential recovery.

The legislative drafters in 1952 were not to touch the substance of the patent law relating to damages created by existing statutes and the courts, but only to codify it. Therefore one is not surprised to find the 1952 Report void of any discussion of the policy behind the provision relating to damages. The 1952 Act drafters changed the wording from "general damages which shall be due compensation for making, using or selling the invention" to "damages adequate to compensate for the infringement." The only significant change would be the dropping of the word "general." One court ²⁵ has interpreted this to mean that the 1952 Act is more restrictive and could exclude some elements previously included in "general damages" (such as profits).

To support its position the Supreme Court cites two cases from the Court of Appeals, one case from a District Court, and two articles appearing in the *Journal of the Patent Office Society*.

²⁵ GP v. USP, 243 F.S. 520, 146 USPQ 245-246.

The first case cited is *Ric-Wil Co. v. E. B. Kaiser Co.*²⁶ by the Court of Appeals for the Seventh Circuit on January 5, 1950. On appeal the defendant contended that the lower court judgment directing a Special Master to take evidence and report "an account of profits and damages which plaintiff has suffered" is in conflict with 35 U.S.C. 70. The judgment from which the appeal was taken requires "that defendant account for and pay to plaintiff all profits realized by defendant through the making, using and selling of any and all of the infringing articles and account for and pay to plaintiff damages equalling the profits plaintiff would have made had it made each of the infringing sales made by defendant." Plaintiff in response cited two cases, *Binger et al. v. Unger et al.*,²⁷ and *Zenith Radio Corp. v. Dictograph Products Co.*²⁸ The court states (emphasis added):

An examination of those cases in our opinion shows that they are no answer at all. Neither have we been able to find any authority construing this recent provision.*** The recent provision does not use the word "profits." It provides recovery for nothing other than "general damages." What elements may be included in such damages is not stated, except they "shall be due compensation." The language appears to make it plain that profits realized by an infringer are not recoverable as such. "General damages" is a broad term which no doubt may include numerous elements depending upon the circumstances of the case. *And whether an infringer's profits is an element of such damages depends upon the facts of each individual case.* We therefore conclude that the judgment relative to an accounting is not in conformity with the statutory provision and that it must be modified accordingly.

Plaintiff's (*Binger*) case states after citing Public Law 587, the 1946 Amendment of 35 U.S.C. 70: "It would appear that profits can now, under the above statute, be included in general damages and recovered."

The *Zenith* case does not support the plaintiff's case in *Ric-Wil*, and one questions why it was cited. But the *Binger* case is on point, giving an interpretation of a new statute by a District Court Judge. The summary treatment given that decision by the Court of Appeals Judge seems unjustified. The *Binger* case must have been in the back of his mind, however, for he says later in *Ric-Wil* that *profits may be an element of general damages, depending on the facts of each individual case.* This distinguishes the case and he is free to dismiss the award as to profits—not a very strong case supporting the elimination of profit from general damages.

²⁶ 179 F2d 401 at 407; 84 USPQ 121.

²⁷ 72 USPQ 166, (S.D.N.Y. September 24, 1946.)

²⁸ 72 USPQ 403, (D. C. Delaware, February 28, 1947.)

In the case of *Livesay Window Company, Inc. v. Livesay Industries, Inc. et al.*²⁹ the court said:

Profits, as such, are not recovered, as the broadening amendment to the statute, 35 U.S.C. 284, makes so clear. The profit is but the true measure of that which infringement has taken from the patent owner for, "whatever may have been the practice prior to the recent statutory amendments, the general damages *now* recoverable are the detriments suffered by the plaintiffs through the infringement." [*Laskowitz v. Marie Designer, Inc.*, Cal., 119 FS 541, 554, 100 USPQ 367, 376.]

The Master in the *Livesay* case calculated the damages awarded by ascertaining the total dollar sales of the infringer, multiplying that by the licensee-claimant's profit ratio, and then adding a 6 percent royalty which licensee was paying the patentee. The defendant-infringer's contention that the award should have been limited to a reasonable royalty of 2 percent was rejected by the court.

Profits in the patent sense, i.e., that which the infringer gains, were never mentioned, and the Master was working with the profits which the complainant made on its licensed sales. The language of the court set forth above shows some confusion, and I do not think adequately distinguishes between profits of the infringer and lost profits of the licensee, the latter normally called damages.

Perhaps *Laskowitz v. Marie Designer, Inc.*³⁰ cited in the *Livesay* case and also by the Supreme Court in the *Aro* case, can give clear support to the Supreme Court's position. The plaintiffs sought several kinds of damages, including recovery for infringement of the design patent, trademark, and tradename, and then sought recovery for unfair competition as a distinct, general tort.

The court said:

The award of compensatory damages for patent infringement is mandatory under the statute [35 U.S.C. 284.]***Whatever may have been the practice prior to the recent statutory amendments, the general damages *now* recoverable are the detriment suffered by the plaintiffs through the infringement. [35 U.S.C. 284.] The profits of the infringer may be the measure when no other is adequate. [*Duplate Corp. v. Triplex Safety Glass* (1936), 298 U.S. 448, 457; 29 USPQ 306, 310].*** *The wrongdoer must yield the gains begotten of his wrong.*

Whichever determinative method is used, the aim is to "compensate (the plaintiff) for the infringement," as the statute declares specifically. And when the profits or a reasonable royalty are chosen as a basis, there is no room for the award of other damages. In

²⁹ 251 F2d 469, 116 USPQ 167 (C.A. 5th Cir. January 24, 1958).

³⁰ 119 FS 541, 100 USPQ 367, (S.D. California February 23, 1954).

ascertaining damages, the object has always been to approximate, as nearly as possible, the *actual loss* suffered by the patentee.

The *Laskowitz* case is very interesting in that it is infringement of a design patent and calls attention to 35 U.S.C. 289, which reads (emphasis added):

Additional remedy for infringement of design patent.

Whoever during the term of a patent for a design, without a license of the owner, (1) applies the patented design, or any colorable imitation thereof, to any article of manufacture for the purpose of sale, or (2) sells or exposes for sale any *** (infringing article) shall be liable to the owner to the extent of his total profit, but not less than \$250.00, recoverable in any U. S. District Court having jurisdiction of the parties.

Nothing in this section shall prevent, lessen or impeach any other remedy which an owner of an infringed patent has under the provisions of this title, *but he shall not twice recover the profit made from the infringement.*

Since the section has not been materially changed since 1887,³¹ it is today rather ambiguous. From the title and substance of the first paragraph, one would assume that recovery of profits is definitely precluded in utility patent suits, and that the provision for recovery of profits in design patent suits is an *additional remedy* over and above the normal remedy. However, the last paragraph refutes this because somehow there is another way in which the patentee can "recover the profit made from the infringement." Where else but under 35 U.S.C. 284?

One wonders at the propriety of the court in *Laskowitz* discussing damages under 35 U.S.C. 284 when it is discussing a matter involving design patents and 35 U.S.C. 289. As to statutory compensatory damages, the court concludes by saying that referral of the case to a Master to hold an accounting for profits should not be made *for the present*.

The Supreme Court in the *Aro II* opinion cites two out of four pieces published in the *Journal of the Patent Office Society* shortly after the amendment of 1946 was enacted. In the November 1946 issue,³² a letter from a Detroit patent lawyer, Daniel G. Cullen, asked a series of questions involving the implications of the revision. He saw the amendment of R.S. 4921 as limiting the award of damages only to

³¹ This is a 1952 revised section, which notes accompanying the text of Title 35 show, was based on 35 U.S.C., (1946 ed.) 75 (February 7, 1887, ch. 105 §§ 1, 2; 24 Stat. 387, 388). "Language is changed."

³² 28 *JPOS* 838.

a reasonable royalty. We have seen that when this same fear arose in the Congressional hearings, it was quickly allayed.

The second piece is an article in the December issue³³ by John Wolff, an employee of the Department of Justice. In the first paragraph Mr. Wolff states:

An amendment to this Act, approved on August 1, 1946, has deprived patent owners of the right to recover the infringer's profits, limiting recovery to the plaintiff damages. So much is clear. But the amendment goes further than to strike out any reference of the Act to profits. It has changed the wording of the Act in regard to damages. Unfortunately the language used does not make it clear what Congress had in mind and is bound to cause uncertainty to litigants.

Mr. Wolff is mainly concerned with what has happened to "special damages" by the use of the term "general damages." He goes on to say:

It would appear then that under the amendment—to use well-recognized terminology—the plaintiff may recover special damages if he can prove any or else he may recover a reasonable royalty as general damages.

He concludes:

The writer believes that what Congress has done is merely to express in different words, rules of law which have long been applied by the courts and that the law today is no different from what it was prior to the effective date of the amendment except perhaps on one point. There has been some authority for the proposition that under the old Act a plaintiff was entitled to a reasonable royalty only if he showed that his damages were not "susceptible of calculation and determination with reasonable certainty." According to this view, the plaintiff must first attempt to prove special damages and only if that proof fails, may he recover reasonable royalty. Under the amendment, such proof is no longer required. The plaintiff may come into court asking for a reasonable royalty without further ado.

Thus Mr. Wolff seems to have adjusted his position in the course of his article, for the Supreme Court in *Aro II* has pointed out that prior to the 1946 amendment profits were an element of recovery. The Supreme Court has cited an article which opens with a statement supporting its position but which upon closer examination reveals a contrary conclusion.

The third article to appear is a letter from Joseph J. Rossman of

³³ 28 *JPOS* 877.

Washington, D. C., appearing in February 1947,³⁴ commenting on the Cullen article and lamenting the hasty legislating. Mr. Rossman states:

Although no reference is made to profits it is believed that where profits are claimed as an element of damages it should be possible to have proceedings before a Master, if the patent owner so desires or, to introduce testimony regarding profits.

He points out that the disputes surrounding the determination of a "reasonable royalty" may exceed in time and expense past disputes before Masters in an accounting for profits. The article was not cited by the Supreme Court.

The final piece of this quartet, also not cited in the *Aro II* decision, appeared in November 1947³⁵ and was written by Eli E. Fink, an attorney from Chicago, Illinois. Concerning the 1946 amendment Mr. Fink states:

It seems to eliminate profits as a basis of recovery and provides for the use of reasonable royalty as the exclusive measure of damages. However, closer reading reveals that the amendment sanctions the recovery of "general damages" not less than a reasonable royalty. What can be allowed in addition to a reasonable royalty?

After reviewing the House hearings he concludes:

It is also fairly clear that proof of profits has not been removed from the scene, despite some argument to the contrary.*** It may be that profits as an element of general damages need not be proved with the same nicety and degree of exactitude as when profits constituted the sole basis of recovery but the vision of an inexpensive, brief accounting trial resulting from the new Act is no more than a mirage.

After examining "the language, the legislative history, and the prior law," the Supreme Court appears correct in saying in *Aro II* that under the present statute only "damages" are recoverable. The word profit is not mentioned in 35 U.S.C. 284. I feel that it was the intention behind the 1946 amendment to continue to allow a patentee to seek the recovery of profits if he so desired as a part of "general damages." It was no longer compulsory upon the court to determine profits, but discretionary with the patentee-plaintiff. The four Justices of the Supreme Court give no discussion of the policy behind their decision. I do not feel they have built a strong case by simply relying upon supporting fragments of preceding controversy.

³⁴ 29 *JPOS* 148.

³⁵ 29 *JPOS* 822.

After stating what the pre-1946 rule was regarding joint tort-feasors and profits, the Court discusses what CTR, the successful patentee, *might* ask for under that rule. Under the pre-1946 rule, the Court said, CTR might argue that it should recover profits made by Aro. Previously we noted that the Court found that CTR was asking only for a *royalty* and that the Court disagreed with this potential award. Now the Court has gone beyond to discuss the recovery of profits which CTR never contended it could recover.

But the present statutory rule is that only “damages” may be recovered.

The Justices then look for definitions of the word “damages” used in the 1952 Act. The Court cites two older decisions by the Supreme Court supporting their position, and *Livesay Window Co. v. Livesay Industries, Inc.*, (*supra*), where the question of damages was phrased as “had the Infringer not infringed, what would Patent Holder-Licensee have made?” Normally, in the drafting of legislation, terms are used in their generally accepted meaning based upon legal precedent, public usage, et cetera. When legislation is hastily or poorly drafted, words are used improperly and a different meaning may be attached to them. The Court has chosen to use the plain meaning rule and look only at the accepted definition of “damages.” Had it looked beyond the plain meaning and consulted the legislative history it would have found that the broad scope of the term “general damages” included “profits.”

Thus, to determine the damages that may be recovered from Aro here, we must ask how much CTR suffered by Aro's infringement, i.e., how much it would have made if Aro had not infringed.

The Court then discusses *Aro I*, where it held that AB could not have licensed Aro's sales of the unpatented replacement fabric. The Court concludes that AB has not suffered any “damages” due to Aro's contributory infringement since it seemed unlikely that Ford's payment to AB under the agreement was anything less than full satisfaction for the direct infringement, although the latter question is to be resolved on remand.

The case was remanded but no further hearings held. The case was settled out of court for nominal damages of one dollar.

SECTION II

When a majority of the Supreme Court concurs in a decision, the

opinion becomes precedent and must be followed by the inferior courts in making their decisions. Dissenting opinions, of course, do not represent authority and are only a presentation of views. When the Court divides evenly the Court of Appeals is sustained. Neither of the opinions represents a majority of the Court and therefore neither is precedent. A unique position is presented when the majority is composed of two groups allied in supporting the decision, but upon different grounds. Another unique situation is presented in the *Aro II* case.

As previously noted, Part IV of the opinion expresses the views of only four Justices. One Justice found that the matters dealt with were not ripe for decision. The four dissenting Justices did not reach the matter of damages and found no infringement. This author finds no discussion of the weight to be given to a decision such as this. I feel that because each of the four parts of the opinion deals with a separate question, each can be viewed as a separate case. Thus, Part IV should be given the weight accorded the minority opinion in a 5-4 decision. It merely expressed the views of the Court. Since this part of the opinion is unnecessary for the decision of the case it constitutes *obiter dictum*.⁸⁶ It should not be cited by a District or Appellate Court as precedent or authority binding upon it, and the lower courts are still free to entertain arguments on the matter and employ their own judgment.

The first case to interpret *Aro II* was *Locklin v. Switzer Bros., Inc.*,⁸⁷ by the Northern District Court of California, October 20, 1964, Judge Sweigert. The case was based on a motion by defendants to modify, so as to conform with the *Aro II* decision, an order directing the Special Master to compute and pass upon the *infringer's profits* and the *patentee's damages*. After citing relevant parts of *Aro II*, the court modified its order. It directed the Special Master to take evidence and *compute the damages adequate to compensate the patentee*. The court pointed out that this did not preclude the Master from considering profits, citing *Livesay v. Livesay, supra*, with approval. The court went on to say: "An infringer's profits may have an evidentiary bearing on the determination of the reasonableness of a royalty in a situation in which such compensation is awarded to a claimant."

⁸⁶ Statements and comments in an opinion concerning some rule of law or legal proposition not necessarily involved nor essential to the determination of the case in hand are *obiter dictum*, and lack the force of an adjudication. *Wheeler v. Wilkin*, 98 Colo. 568; 58 P2d 1123, 1226.

⁸⁷ 235 FS 904; 143 USPQ 233.

In *Marvel Specialty Co. v. Bell Hosiery Mills*,³⁸ by the Western District Court of North Carolina, November 5, 1964, Judge Craven instructed the Master who was to hear the accounting that his approach might vary from damage to the patentee to profits gained by the infringer. Nothing was to be gained by having the Master ride off in both directions. The Master was instructed to determine the damages authorized by 35 U.S.C. 284, as recently interpreted in *Aro II*.

When the report of the Special Master was adopted two years later, November 2, 1966,³⁹ plaintiff argued that the Master erred in computing the damages. The Master had figured the gross rental fee on the patented machine and then multiplied by the patentee's average percent profit to get the net profit lost by the patentee. Plaintiff contended that this allowed the infringer to use the patent for only one half that paid by authorized users. Judge Craven stated:

Plaintiff's contention may not be lightly brushed aside, but, in my judgment, merely illustrates the difficulty of applying the theory of *Aro* (II) to the facts of a given case, . . . I believe the "net" approach is the correct one and required by *Aro*.

The Ninth Circuit Court of Appeals in *Atlas-Pacific Engineering Co. v. Geo. W. Ashlock Co.*⁴⁰ Judge Bastian, December 15, 1964, amended March 10, 1965, affirmed Judge Zirpoli's⁴¹ holding of the patent in suit as valid and infringed. The defendant produced infringing machines and rented them. The trial court awarded defendant's total income from the rental of the infringing machines as a reasonable royalty. The Court of Appeals disagreed. The court said:

Our independent examination of a number of cases, which are not at all uniform, reveals that there is a variety of possible elements of damages for patent infringement, such as the profits made by the infringer [*Zysset v. Popeil Bros.*, *supra*; *Henry Hanger & Display Fixture Corp. v. Sel-O-Rork Corp.*, 207 F2d 635, 123 USPQ 3 (5th Cir. 1959); *Mason City Tent and Awning Co. v. Clapper*, 144 FS 754, 11 USPQ 330 (W.D. Mo. 1956); and see *International Industries v. Warren Petroleum Corp.*, 248 F2d 696, 115 USPQ 104 (3rd Cir. 1957), *cert. dismissed* 355 U.S. 943 (1958)], the actual damages to the patentee, such as loss of sales, especially if such damage exceeds the infringer's profits, or a reasonable royalty, if one can be shown.

The court then found that as a *reasonable royalty* the amount awarded was excessive. But the court pointed out that the award need not be limited to a reasonable royalty and that although net profits are

³⁸ 235 FS 218; 143 USPQ 283.

³⁹ 152 USPQ 313.

⁴⁰ 339 F2d 288; 144 USPQ 55.

⁴¹ 225 FS 205; 139 USPQ 421.

not recoverable as such, they may provide evidence of an element of the complainant's damages, citing *Livesay v. Livesay*, *supra*, and "the persuasive reasoning of four of the five majority Justices" in *Aro II*. The court remanded the case and left it to the lower court to determine the proper measure of damages.

Twice in the case of *England v. Deer & Co.*, before the Southern District Court of Illinois,⁴² Judge Mercer addressed himself to the effect of *Aro II*, on his previous order to the Special Master requiring the defendant to file a statement of account, including an account for profits. The court cites *Zysset v. Popeil Bros., Inc.*⁴³ (7th Cir.), to support the court's conclusion that an infringer's profits, if proved, may be relevant evidence bearing upon the question of damages. *Zysset* held that the District Court erred in not awarding plaintiff damages measured by defendant's profits from infringement.

Judge Mercer points out that the Supreme Court denied certiorari to the *Zysset* case on February 17, 1964,⁴⁴ and also denied a petition for rehearing on March 23, 1964.⁴⁵ After the *Aro II* opinion, Popeil filed a motion for leave to file an additional petition for rehearing upon the ground that *Aro II* conflicted with the Court of Appeals' decision. The petition was denied on October 12, 1964. Judge Mercer feels justified in construing this denial as a rejection by the Supreme Court of any conflict between *Aro II* and *Zysset*.

After granting an oral argument on defendant's motion to vacate, Judge Mercer found that he still construed the rationale of the prior cases to be "that all relevant evidence, including an accounting for profit, may be considered for its bearing upon the assessment of damages."

In *Georgia-Pacific v. U. S. Plywood* (*supra* footnote 9), June 15, 1965 (referred to herein as *GP v. USP*), the patentee USP claimed, as one alternative mode of determining recovery from the infringer GP, the net profit GP made by the sale of the infringing product. USP waived any claim to a reasonable royalty. The Special Master awarded USP a sum equal to GP's profit on the infringing sales. Judge Herlands stated that while the patentee may waive the right to a reasonable royalty, the court was not foreclosed by such waiver, and that only a reasonable royalty could be recovered.

After looking at the history of recovery in infringement cases and

⁴² 236 FS 356, 143 USPQ 236 (October 30, 1964), and 144 USPQ 122 (January 4, 1965).

⁴³ 318 F2d 701; 137 USPQ 694 (1963).

⁴⁴ 376 U.S. 913; 140 USPQ 694 (1964).

⁴⁵ 376 U.S. 959; 140 USPQ 694 (1964).

examining the 1946 and 1952 legislative history of § 284, the court quoted extensively from *Aro II* and from *Marvel Specialty Co. v. Bell Hosiery Mills, Inc.*, *supra*, and held that "In view of the foregoing, the court sustains GP's objection to the Special Master's use of GP's profits as the measuring rod for USP's damages; and the court awards USP a reasonable royalty."

Among the novel arguments used by the court to support this position are the following:

- (1) that while there is a distinction between "profits" and "damages" recognized in the law, the court would heed the admonition that "judges in construing legislation ought not to imprison themselves in the fortress of the dictionary," citing with approval Justices Holmes, Learned Hand and Frankfurter. Thus the court was willing to look beyond the distinction between the words "profits" and "damages" and implement the legislative intent. (The Supreme Court in *Aro II* seemed to have forgotten this admonition when it extracted its definition of "damages" from "the fortress of the dictionary" by way of the plain meaning rule.)
- (2) that damages and profits were distinct before 1946, the term "general damages" not having been expanded in 1946 to include profits and the stark "damages" in the Act of 1952 certainly not including profits. (Yet elsewhere the court points out that the 1952 Act made no substantive change in the 1946 amendment.)
- (3) that the conspicuous omission of any mention of "profits" in the Acts of 1946 and 1952 takes on heightened significance when compared to the specific provisions for the recovery of profits in Section 35 of the Lanham Act covering trademark infringement and in 35 U.S.C 289 covering design patent infringement. The court recognizes that the second paragraph of Section 289, covering design patents, may strengthen the position favoring recovery of profits, but does not find it persuasive.
- (4) that the intent of Congress was not to make it possible for the patentee to have the option of avoiding the long and expensive accounting for profits by eliminating mandatory accounting but to avoid accounting completely because they were oppressive to the infringer. Profits may be used as a factual guide for setting a reasonable royalty but they do not have to be determined with a great amount of exactitude. Thus there is no need for a protracted and complex accounting.

- (5) that while the decline of unjust enrichment has an ethical appeal and harmonizes with the modern trend "of enforcing increasingly higher standards of fairness or commercial morality in trade," 3 Restatement, Torts 540 (1938), patent infringement cases are covered by statute and not by general principles of the common law.
- (6) that the award of a reasonable royalty may be trebled if the infringement is willful. Since it is desirable to remove invalid patents from commerce in conjunction with our federal anti-monopoly policy, the deterrent aspect of recovery should not be overemphasized. Absent fraud in the procurement, there is no procedure available to the government to challenge a patent. Thus, overemphasis of the deterrent function of damages could well lead to a stultification of the only expedient method of testing the validity of a patent.

The court remanded the case to determine the amount of reasonable royalty. This opinion goes into a far more detailed analysis of the problem under consideration than that contained in *Aro II*.

There are two recent cases to mention here. In the first, *Bartlett et al. v. Winton*,⁴⁶ Middle District of Florida, June 14, 1966, Judge Simpson, without referring to *Aro II* or *GP v. USP*, awarded profits as a reasonable measure of the patentee's damages. In the second, *Koehring Co. v. National Automatic Tool Co., Inc.*,⁴⁷ Southern District Court of Indiana, July 20, 1966, Judge Dillin, without referring to *Aro II* or *GP v. USP*, found that: "Plaintiff is entitled to damages from the defendant for such infringement, the actual damages to be measured by the profit made from the sale of the infringing machines, as determined by an accounting, or by a reasonable royalty, whichever is the greater. 35 U.S.C. 284."

The above cases are indicative of the confusion which surrounds 35 U.S.C. 284 and particularly the role of profits in determining "damages." *Zysset v. Popeil*, which was denied certiorari to the Supreme Court, awarded profits. *Aro II* says profits are excluded from the award of damages. Yet, a petition for rehearing in *Zysset* based upon this conflict was denied by the Supreme Court. *Locklin v. Switzer, supra*, correctly points out that *Zysset* inaccurately quotes: "An infringer's profits are a traditional measure of damages" as a statement of the District Court in *Coleman v. Holly*⁴⁸ when it is merely a contention of "The Appellee's Argument."

⁴⁶ 150 USPQ 227 (1966).

⁴⁷ 150 USPQ 777 (1966).

⁴⁸ 296 F2d 660 at 663, 122 USPQ 559 (9th Cir. 1959).

The question of damages is discussed in relatively few infringement suits since the court must first find the patent valid and infringed. Most courts postpone the matter for later determination or refer the case to a Special Master. At this point many cases are settled out of court, and only in relatively few is the amount of recovery litigated.

One factor which appears in the cases is that if an accounting is held, it will include a determination of the profits made by the infringer. How this figure is used by the courts is not settled law. But the main purpose of the 1946 amendment (as stated in the report and as interpreted by *GP v. USP*), to avoid accountings and minimize "the law's delay," has been obviated. Profits continue to be determined. The legal process continues to be lengthy, complex and expensive.

SECTION III

A patent is regarded as personal property⁴⁹ which must be protected from trespass and misappropriation just as other forms of personal property. In an ordered system enforced by public law, protection is provided by sanctions. Death, imprisonment and fines are familiar sanctions. The strength of the sanction is dependent upon the degree of culpability attached to the trespass. Normally an attempt is made to have a sanction be an effective deterrent to the trespass.

Sanctions to prevent patent infringement, that is, trespass of a patent, present a unique situation. The patent grant is only presumed to be valid and this presumption can be refuted. A patentee cannot be sure his personal property, represented by the patent, really exists until it has been tested in the courts. The only place to test the validity of a patent is in the courts. It is in the public interest that invalid patents be removed from the patent system and the subject matter returned to the public domain. Therefore to a certain extent we encourage the testing of patents in the courts.

The two strongest and contending interests to be considered are:

- (a) the protection of personal property from misappropriation; and
- (b) the protection of the public domain from misappropriation through invalid patents.

Items (a) and (b) are diametrically opposed. Item (a) favors strong sanctions; (b) favors weak sanctions. The sanction protecting the

⁴⁹ 35 U.S.C. 261.

rights secured by a patent ultimately agreed upon will be a balancing of (a) and (b).

If one were to design an ideal system of sanctions for patent infringement suits, other considerations must be taken into account. The system ought to provide for speedy and inexpensive proceeding. The indigent as well as the rich litigant ought to have equal access and protection.

An ideal system would allow a high degree of predictability. The benefits versus the liabilities of challenging a patent could be calculated before trial. With rules to use as guides, less litigation would find its way into the courts. Once validity and infringement were determined, recovery would be a matter of fact and not speculation.

The sanctions would not encourage harassment or oppression of either the patentee or the infringer. Participation would not require disclosure to the public of otherwise confidential information.

Because all of these elements cannot be fulfilled, we must weight their importance in light of the end which the patent system is designed to achieve, that is, to promote progress in the sciences and useful arts.

On the strong end of a scale balancing sanctions would be a criminal sanction; this would put the infringer in jail for a period of years. Normally we do not associate prison sentences with the business world, but that sanction is used in some instances, such as in antitrust violations.⁵⁰

Another strong sanction which would eliminate all lengthy proceedings and promote predictability would be a fine, payable to the patentee or the government upon a determination of infringement. This is somewhat similar to design legislation wherein a minimum recovery of \$250 is provided.

Imprisonment and fines are sanctions for patent infringement in the countries of France, Germany, the Netherlands, and Switzerland. In Japan profits are presumed to be the amount of damage suffered by the patentee. In the United Kingdom the plaintiff is entitled, at his option, to an accounting of profits in lieu of damages.

On the weak end of the scales would be the removal of all monetary recovery. This would allow as the only preventive sanction injunctive relief. Injunctive relief is often an ineffective sanction since many patents have a short useful life, and an injunction, after a lengthy

⁵⁰ Sherman Act, §§ 1, 2 and 3 provide for a fine not to exceed \$5,000, and imprisonment for not more than one year. For a general discussion see "What Type of Remedy Is Most Effective?" in *A Study of Antitrust Laws*, Joseph W. Burns. (New York: Central Book Co., 1958), p. 511.

proceeding, could not prevent damage to the patentee.

Another weak sanction is the recovery by the patentee of only a reasonable royalty and no more. This was proposed in 1946 and soundly rejected by the House Subcommittee on Patents. The fear is that this would amount to the granting of a compulsory license to all who chose to make, use or sell a patented invention and would be disastrous to the patent system. When a patent attorney can advise his client to go ahead and infringe, without a license, since the only sanction would be a reasonable royalty, the patent system has lost its effectiveness.

Today the sanctions provided by statute are injunctive relief under 35 U.S.C. 283 and monetary recovery under 35 U.S.C. 284. Injunctive relief is outside the scope of this paper, but it must be noted that preliminary injunctive relief *pendente lite* will not be granted unless the patentee can show irreparable harm.⁵¹ Permanent injunctive relief comes only after final adjudication. This may be late in the life of the patent.

Included in the monetary recovery but discretionary with the court is the award of attorney fees⁵² and court costs.⁵³ The award of attorney fees is made only in exceptional cases and is remedial, not penal, in nature.

The monetary recovery now favored by the Supreme Court is the amount of money the patentee can prove he has lost due to the infringement, that is, net profit on lost sales, deflated competitive position, et cetera. If the patentee cannot show any damage, no sanction is imposed on the infringer, not even a reasonable royalty.

The sanction under consideration in this paper involves the profit made by the infringer. Should this money, often called unjust enrichment, remain with the infringer, or should it be awarded to the patentee? The main objection, which seems to underlie the decision of the Supreme Court in *Aro II* and other courts, as previously discussed, is that "profits" have no direct relationship to the "damages" of the patentee. There is no interdependence. Profits may have some relevance in determining a reasonable royalty, but they are not direct evidence of the damage to the patentee. Thus, awarding the profits, unjust enrichment made by the infringer, to the patentee is itself a form of unjust enrichment for the patentee. The patentee is "reaping where he has not sown."

A strong and cogent argument can and should be made to the courts

⁵¹ Ryan v. Ideal Toy Corp., 151 USPQ 166.

⁵² 35 U.S.C. 285.

⁵³ 28 U.S.C. 1920.

by the Patent Bar in an effort to reverse the current trend toward weaker sanctions in patent infringement suits. So far the courts have relied strongly on what I consider a misinterpretation of the 1946 amendment. Perhaps the only remedy is by the legislative process. Without a doubt the 1946 amendment is ambiguous. *It is time for a re-examination and redefinition of the proper recovery in patent infringement suits.*

Several modifications of Section 284 have been proposed. In 1954 Norman C. Fulmer⁵⁴ proposed that the award be "damages adequate to compensate for the infringement and adequate to discourage infringement." He stated that the "courts will be acting in the public interest if damages for patent infringement are ascertained with a view toward discouraging infringement."

The Patent Law Revision Committee of the American Bar Association on September 1, 1965, proposed a resolution that Section 284 be amended to award damages adequate to compensate for the infringement, but in no event less than defendant's profits attributable to the infringement or less than a reasonable royalty, whichever shall be greater. This is an effort to put the word "profits" back into the section. Perhaps a section which is more specific as to other elements of recovery which should be considered by the court could be drafted.

Another proposal could be that Title 35, Section 284 be amended to read as follows:

§ 284 *Recovery*

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, *not limited to* but in no event less than a reasonable royalty [for the use made of the invention by the infringer] together with interest and costs fixed by the court.

When damages are not found by a jury, the court shall assess them. In either event the court may increase the damages up to three times the amount found or assessed.

A fine shall be levied by the court upon the infringer in an amount equal to the profit of the infringer less the damages awarded to the claimant.

The court may receive expert testimony as an aid to the determination of damages, profits, or of what royalty would be reasonable under the circumstances.

I believe this proposal satisfies those, including three present members of the Supreme Court, who feel that a successful patentee must be awarded only what he can prove he has lost. It also provides a sanction which would be effective in discouraging the infringement of patents.

⁵⁴ 36 JPOS 328, May 1954.

The infringer would not gain from and the patentee would be fully compensated for the infringement of the patent.

The phrase "not limited to" while seemingly redundant is incorporated to freeze any judicial movement towards construing "a reasonable royalty" as the upper limit on the amount of recovery.

Efforts are being made to raise the quality and reliability of U. S. patents.⁵⁵ Commensurate with the strengthening of patent validity should be strengthening of the sanction preventing patent infringement. A valid patent is worthless if the rights conferred by it are not respected.

⁵⁵ *Supra* footnote 2.

RETROSPECTIONS

This section will include biographies and other reviews of careers, discussion and documentation of events important to the history of inventions and discoveries, and anecdotal or historical material pertaining to judicial opinion and legislation.

Highlights in the Careers of Award Nominees for 1966

We are continuing to share with our readers excerpts from the rich information contained in letters we have received nominating candidates for the 1966 Inventor of the Year Award. Collectively they present a broad spectrum of characteristics that make for inventive creativity. Volumes 9, Number 3 and 10, Number 2 contain letters of nomination for previous award candidates.

The Inventor of the Year for 1966, Gordon K. Teal, includes his background in his address beginning on page 1 of this issue.

THIS LETTER IS WRITTEN TO NOMINATE Mr. Billy M. Horton,* Technical Director of these Laboratories, for the 1966 Inventor of the Year Award. This nomination is based on Mr. Horton's invention of fluid amplification, also now known by various other terms including fluidics and fluetrics.

* Col. M. S. Hochmuth, commanding the Ordnance Corps, Department of the Army, Harry Diamond Laboratories in Washington, D.C., sent the above letter and attachments in renominating Billy M. Horton.

Mr. Horton was previously nominated for the Inventor of the Year Award (see *IDEA*, Vol. 9, No. 3, page 524) in 1964, the year in which Mr. Carlson, the inventor of xerography and an obviously outstanding nominee, was selected for the award. Renomination of Mr. Horton for this year's award seems appropriate because, during the past two years, fluercics technology has continued to have an ever-growing impact and importance for military and civilian applications, in Government and industry alike.

Fluercics activity has proliferated to the point that more than 50 industrial concerns and universities are now conducting research and development in this remarkable new technology. Among the many and varied applications in use or under development are jet engine controls, torpedo controls, air-conditioning systems, stabilization and control of aircraft and rockets, control of diesel locomotives, control of numerous chemical and industrial processes, and various medical engineering functions including heart pumps and respirators. Although many commercial firms are loath to divulge the extent of their investment in the new science, or to discuss practical applications which they have developed, many recent articles in trade and technical publications (see enclosures) attest to the magnitude of interest in the field. Several writers have predicted that the market will reach \$250 million by 1970. With more and more potential applications of fluercics being conceived, and flueric devices and systems making the transition from development to production and practical use, still greater impact over the coming decades may be predicted with reasonable confidence.

The Board may not be concerned with the institutional affiliations of Inventor of the Year nominees. However, the Board would doubtless agree that, in an age in which extensive Government involvement in research and development appears necessary, the public interest requires that a certain number of outstanding inventors devote themselves to Government service. Mr. Horton clearly qualifies as such an inventor. Appropriate recognition of Government inventors from time to time, as well as of non-Government inventors, could serve the interest of the public, the patent system, and the objectives of The PTC Research Institute. It may also be noteworthy for present purposes that: (1) Mr. Horton's fluid amplifier invention was unrelated to his Government duties at the time it was invented; (2) he, like many a non-Government inventor, had to have faith in his invention and had to overcome the burden of convincing others that fluid amplifiers should be funded and developed; and (3) his basic patents have been

assigned to private owners (subject to royalty-free license to the Government), so that traditional patent incentives are functioning to further the non-Government development of his invention.

It is noteworthy that Mr. Horton has recently received two extremely high honors for his work in the field of fluid amplification. The first, presented in 1965, is the highest Department of the Army Award—the Exceptional Civilian Service Award, accompanied by \$3,000. In 1966, the City of Philadelphia gave its 1966 John Scott Award to Mr. Horton, Mr. Raymond Warren and Dr. Ronald Bowles. The latter two men worked with Mr. Horton following his initial invention of the fluid amplifier. Each man also received \$1,000 with this award. These two honors attest to the fact that Mr. Horton's invention is a truly unique and outstanding one to modern science.

The following article appeared in the December 2, 1966 issue of *Time*.*

One of the most familiar techniques for teaching elementary electricity is to compare the flow of electrons through wires to the passage of fluids through pipes. The analogy is so valid that scientists are now changing it from a textbook explanation to practical application. They are building fluid circuits that supplement and even replace some electronic devices. By controlling and amplifying the flow of fluids (either gases or liquids), just as electron flow is controlled and amplified in electronic circuits, they have conjured up a variety of odd new fluidic devices that offer valuable improvements on their electronic counterparts.

Because they are unaffected by temperature extremes, radiation, vibration or shock—conditions that often damage or knock out electronic circuits—fluidic controls show their greatest promise in aerospace and defense work. The Army has already successfully tested a fluidic roll-rate control on its TIM (test instrumentation) missile; it is evaluating a fluidic navigational device developed by Martin Marietta Corp. for use by foot soldiers. Honeywell Inc. has developed and flown a fluidic autopilot. In less esoteric applications, the new technology is being used on New York Central locomotives, General Electric turbines and the machinery that manufactures Speidel watchbands.

Switches & Amplifiers. In place of the battery or generator that energizes an electronic circuit, fluidic devices use a continuous stream of fluid, usually air. The supply can come from a pump, from the hot gases of a jet engine, from air forced through nose vents in missiles or airplanes, or even from a tank of compressed air. In a simple fluidic circuit, the power stream is fed into the base leg of a Y-like arrangement of tubes or channels. As the stream flows through the Y toward outlets at the end of two diverging arms, a fluid-flow phenomenon, called "the Coanda effect," causes the stream to attach

* Reprinted from the December 2, 1966 issue of *Time* appearing under the title, "Taking a Fluid Approach." Courtesy *TIME*; copyright Time, Inc. 1966.

itself to one side of the circuit and to flow out through only one of the arms.

A tiny "control jet" of air, blown perpendicular to the power stream as it passes through the base leg, can force the stream to attach itself to the opposite side of the circuit. When that happens, the power stream flows out entirely through the other arm of the Y. A puff of the other control jet reverses the process, just as a small voltage change on the grid of a vacuum tube can control a relatively heavy flow of current through the tube's plate circuit. Like a vacuum tube, the fluidic circuit can thus be used as a switch to turn on or shut off a supply of power.

By etching or carving out a cavity at the point where the arms and base leg of a fluidic circuit meet, . . . fluidics engineers can prevent the power stream from clinging to either wall. Instead, it flows down the center of the Y and divides equally between the two outlets. In this "anti-Coanda" configuration, the application of a control jet merely deflects the power stream by an amount proportional to the intensity of the jet. As the output of the two legs varies with the strength of the control jet, the fluidic circuit is once more something of a vacuum tube. In effect, it is an amplifier, exaggerating with its power stream the fluctuations of its tiny control jet.

Computers & Rockets. Scientists have devised countless ways to make use of the controlled output of fluidic circuits. A fluidic guidance system can control the course of a torpedo by shooting out jets of gas or sucking in water. This distorts the surrounding boundary layer of water, changes its frictional effects and causes the torpedo to turn. In a rocket flying through the atmosphere, the control jets of a fluidic stabilization system are attached to vents in the rocket's nose cone. As the attitude of the rocket begins to change, the nose vents gulp in air at different pressures, and those changing pressures control a small jet of hot gases shot at right angles into the rocket's exhaust. As the exhaust gases are deflected, they correct the rocket's attitude.

On an assembly-line conveyor belt, moving parts momentarily interrupt strategically placed jets of air shooting across the belt. The interrupted air jets, connected to the control jets of a fluidic circuit, cause power streams to flow and stop, opening and closing valves. The valves in turn activate automated pneumatic machines that process the passing parts.

Toys & Toothbrushes. Though the first promising fluidic circuits were developed only seven years ago, at what is now the Army's Harry Diamond Laboratories in Washington, scientists are fast catching up with electronic technology. They have already produced fluidic oscillators, memory and logic circuits, and have devised fluid versions of resistors and capacitors. They have also learned to etch fluid channels into small blocks of metal and plastic, producing fluidic versions of electronic integrated circuits [TIME, Sept. 2]. Though they are still no match in size for the microscopically small electronic I.C.s, several compact fluidic circuits can now be interconnected and fitted into durable and compact inch-square wafers.

For all the work that has already been done, many fluidics problems remain. Scientists still do not fully understand some fluid-flow phenomena; fluidic circuits are still relatively cumbersome

and are generally more expensive than their electronic counterparts. In addition, the speed of fluidic devices is limited by the maximum velocity of a pressure wave through the fluid—which is the relatively slow speed of sound. This places them at a distinct disadvantage in competition with electronic computers, which are limited in speed only by their size and the velocity of an electrical impulse—the speed of light.

Despite these shortcomings, many U.S. companies have established fluidics divisions. They are spending millions of dollars annually on fluidics research and development and will sell an estimated \$30 million worth of fluidic products this year. One pioneering firm, Maryland's Bowles Engineering Corporation, works entirely on the development of fluidic technology and systems. Appliance makers are developing washing machines and dishwashers with fluidic controls. Detroit auto manufacturers are considering a number of fluidic devices such as fluid amplifiers for gas turbine engines. Mattel Incorporated is developing fluidic-controlled toys that will respond to sound, and General Time Corporation has been granted a patent on the first fluidic automatic toothbrush.

The following material appeared in *Missiles and Rockets**:

Fluidics as a field—The term "fluidics" as used throughout this report refers to that field of technology that deals with the use of fluids, either gaseous or liquid, in motion to perform functions such as signal or power amplification, temperature or rate sensing, logic or computation, and control.

Inherent in the term is the concept of achieving amplification or gain—and, often, the absence of moving parts.

In the first fluidic circuits developed by Harry Diamond Laboratories, a fluid stream of relatively high energy was directed across a cavity. Through introduction of a low-energy control stream perpendicular to one side of the power stream, the latter can be deflected into a desired outlet aperture, through which it will continue to flow until deflected momentarily by a control stream from the other side. Thus, the power stream can readily be directed into either of two channels at will. From this simple geometric "gingerbread man" a multitude of progressively more sophisticated devices have been built.

By combining or cascading fluid amplifiers, enormous gains can be achieved from a very low initial input.

Honeywell considers all fluidic devices as falling into one of three major classes: sensors, amplifiers or logic elements, or actuators. From these, complete fluidic systems can be built, using either analog or digital techniques.

Sensors detect some physical condition or change, and provide a fluid signal as an output. Amplifiers or logic elements can build up this signal and process it or store it. The actuator can then be instructed to act on this processed signal and possibly perform some physical action.

History of fluidics—The groundwork for what may now be called

* Reprinted from *Missiles and Rockets*, February 8, 1965, under the title, Market May Hit \$250 Million by '70."

the field of fluidics was laid by many persons during the last century, working with pneumatic and hydraulic systems.

One might start with Chichester A. Bell, who developed a turbulence amplifier in 1892. The device found use in Europe as an acoustic sensor and amplifier (at low frequencies). Or one might include the work of R. E. Hall, who developed a turbulence amplifier used as a logic control device.

Certainly a key to modern fluidic technology was provided by Henri Coanda in 1932. Called the Coanda Effect, the phenomenon involves the tendency of a fluid stream emerging into a throat area to attach to one wall. Coanda found that applying a small pressure perpendicularly to the side of the jet nearest the wall would cause the stream to attach to the opposite wall.

However, no matter how close the early inventors came to fluid amplifiers in their designs, none really recognized or understood the meaning or fundamental use of signal gain.

In 1959, Dr. R. E. Bowles and Billy M. Horton of the then Diamond Ordnance Fuze Laboratories (now Harry Diamond Laboratories) were discussing some work by Bowles in the realm of fluids in motion—more specifically, dynamic fluids and functional performance associated with vacuum cleaners and firefighting equipment.

Out of this casual talk came a suggestion by Horton to use control jets. Thus the concept of fluid amplification and, thereafter, potential application of systems or components using such techniques.

Horton during the next few days nearly filled an engineering notebook with sketches and design notes. Working at their homes, Bowles and Horton, assisted by another DOFL engineer, Ray Warren, soon developed a handful of working components including inertial sensors, amplifiers and logic devices.

With these ideas and designs in hand, the three inventors were able to obtain Army funding to begin a limited R&D effort.

Horton filed for a patent in October, 1959, refiled in September, 1960, and obtained the key fluidic patent for a "Fluid-Operated System" in February, 1964. He also secured patents for a "Negative Feedback Fluid Amplifier" and "Fluid Systems for Aircraft Control."

Bowles and Warren also secured a basic patent covering sidewall control effect, and thus the three held a firm grasp on a new field.

This latter patent covers a whole family of digital devices using wall interaction.

Current patent situation—The three basic patents issued to Bowles-Warren and Horton covered the fluidic devices mentioned above and also a fluidic bistable (flip-flop) element, oscillator and a positive feedback device. All have held up in a continuing series of interference proceedings.

Bowles left DOFL in 1961 to establish his own firm specializing in fluidics R&D. Subsequently, rights to the three basic patents were purchased by Bowles Engineering Corp. from the inventors.

The Government enjoys a royalty-free benefit included in each patent, and BEC freely licenses reputable manufacturers for unrestricted use of the patents.

Three interferences filed by Bowles against the Soviets were terminated recently by the U.S. Patent Office in Bowles' favor. The

firm has filed three more against Sperry Rand and one against General Electric Co.

BEC also has purchased rights to four other patents issued to the three inventors. The firm now has more than 25 of its own patents pending.

Sperry Rand has filed nearly 150 disclosures, out of which it probably will secure 100 patents. Kollsman, Honeywell, Bendix, GE and IBM hold important fluidics patents and are steadily enlarging their claims.

JOSEPH BANCROFT & SONS COMPANY RESPECTFULLY NOMINATES Mr. Richard R. Walton* of Boston, Massachusetts, for the 1966 Inventor of the Year award of The PTC Research Institute.

Mr. Walton is a stimulus and model to all individual inventors, and an example of a creative person who has joined hands with large and small companies in industry.

His inventions in connection with shrink proofing of knitted wear have proven basic in the industry. His washing machine developments are licensed to Whirlpool (Kenmore) and Frigidaire. Many other of his inventions which he has licensed to industry, are only now emerging or still in the development phase, as in the cases of automated handling of limp fabrics for the sewing and laundry industries and the creping and finishing of synthetic webs, fibers, textile, and paper.

His current efforts in the development of a smoke breathing machine for test animals for cancer research and the development of a low cost hand-powered washing machine for underdeveloped countries are also worthy of consideration.

We suggest that recognition of an inventor during the fruitful period of his life, with great success behind him, but while yet in the midst of his creative struggle, not only is just and rewarding to the inventor himself, but also is the best stimulant and believable example that one may present to creative youth.

The following article on Mr. Walton appeared in the August 20, 1964 issue of *America's Textile Reporter*:

A Boston, Mass., inventor explains how his interest prompted experiments in controlling shrinkage that led to the development of

* The above letter of nomination and the material which follows was submitted by Linton G. Ray, Jr., President of Joseph Bancroft & Sons Co. of Wilmington, Delaware.

today's Pak-nit process for knitted cottons. "I like to work in the survival areas of food and textiles," says Richard Rhodes Walton. He describes himself as "a chemical engineer by exposure and a mechanic through probability" and says that he found his key to the shrinkage problem when he realized that in textile processing fibers are made to behave in a way foreign to their natural inclination.

"Everything is pulled and stretched in textile processing," he says. "In knitting, the loops of the fabric are pulled and stretched through cloth winding, calendaring and other processes, and the result is a most unnatural state. In drying, especially tumble drying, the loops have a chance to relax again and so there is shrinkage. Our machine pre-relaxes the loops by compacting the fabric up to 25 percent. The loops find their favorite position after one or two subsequent washings at home and further shrinkage is restrained."

(Mr. Walton's machine is called the Compactor and is manufactured by Compax Corporation, Woodside, New York, a wholly-owned subsidiary of Tubular Textile Machinery Corporation, which licenses the Pak-nit trademark.)

In fact, it was the widespread use of tumble drying in the late 1940s that really caused the problem. "Tumble drying caused twice the shrinkage of flat drying," Leo Feuer, research director of William Carter Company, Needham Heights, Mass., says. "There arose almost overnight a critical need for shrinkage control in knitwear. . ."

Richard Walton, who had meanwhile been engaged in research on paper creping, was approached by Fabric Research Laboratories and told of the interest in shrinkage control for knitwear. Mr. Walton was able to apply some of his general principles used in paper creping to the problem of cotton knits. Mr. Walton went to William Carter Company with his compacting theory of pre-relaxing the loops and the initially skeptical company soon became convinced that the idea was feasible.

"I'm a try and try again type of inventor instead of a theoretical one," Mr. Walton says. His compactor is basically a two-roller unit, each roller operating at a different speed, that with the aid of heat literally compacts the loops in the fabric. The pilot model and subsequent refinements were made in Mr. Walton's machine shop.

Richard Walton and officials of the William Carter Company approached Tubular Textile shortly after. But it took almost eight years for the latter company to perfect translation of the pilot model into a commercially acceptable production model. The completed machine was first marketed in 1962 (April 16, 1964, issue of the *Reporter*) . . .

Meanwhile, Richard Walton keeps his hand in textiles. He is currently working on a machine that mechanically imparts stretch in a fabric. Among his other inventions are an automatic cloth pick-up and feeder to sewing machines, a device for feeding flat goods in laundries, a portable washing machine, improved agitators for washing machines, a device for increasing the absorbency of nonwovens and imparting drape, and machines for creping and elasticizing paper.

These machines use new principles that could have been discovered by others but weren't. "Corporations often prefer to refine existing products rather than encourage the discovery of entirely new

approaches to design and performance," Mr. Walton says. "I don't fit into the mass inventive technique."

And as for the Compactor, "It's the greatest thing that has happened in the history of the knit goods industry," William L. Carter, Vice-President of William Carter Company, has said.

* * *

AS VICE PRESIDENT MARKETING WORLDWIDE for the Colgate-Palmolive Company, * one part of my job is to try to perceive and specify what needs people may have now or in the future which my company might satisfy through "on time" and "in time" use of its amalgamated talent.

Around the world I have observed the obvious—most of the people are poor and possess few of the labor saving devices which are basic to the U.S. home. Although most countries have, to a varying degree, mimicked the U.S. in stimulating and educating basic consumer desire, the economies of most countries are far behind the U.S. in satisfying their needs at a price consistent with spending power.

In a sense, the eye of advanced industrial technology is on the moon, or on frills, not purposefully "looking inventively backwards" to provide a "products bridge" to economies which are on the other side of the tracks. "They hear us, but they can't quite reach us."

From whatever viewpoint one wants to take—sociological, political or industrial "profitical," it is obvious that the backward will benefit and take advantage of educational opportunity faster as their living burdens are lessened. They also will pay for the opportunity. Five-hundred dollar washing machines, however, are not within the reach of this desire.

Because most countries cannot provide mechanical washing help within the ability of the average family income, it was obvious to me that "perfect is the enemy of good" and that an interim device was needed to provide help to the millions who wash by streams—to release women from the bondage of cleaning and preserving the clothes on their families' back. Why couldn't modern science invent a washing device, even manual, which might wash clothes faster and better than the human hand—the woman's hand.

As a result, I asked Richard Walton, who, luckily was both my friend and the leading inventor in modern mechanical washing processes to consider "inventing backwards"—to apply his knowledge, not

* Another letter from Robert W. Young, Jr., Vice President of Colgate-Palmolive Company, on behalf of Richard Walton was forwarded to the Institute by Mr. Walton's patent counsel, J. N. Williams, of Fish, Richardson & Neave of Boston, Massachusetts.

to a slightly better mechanical device, but to a much better manual device. I suggested that it should theoretically be costed "all-in" \$2.

Mr. Walton gasped, but went to work with a double will. He was motivated both by the challenge of the invention and the once in a lifetime opportunity to create a "people mover," a "society changer."

Mr. Walton eventually provided three models for my company's evaluation, from which we jointly chose one. When it was made available to Mexican peasant women, the resultant response was beyond our hopes. Mr. Walton personally demonstrated and washed clothes along with the eventual user, carrying back both the praises and suggestions of these highly aware and intelligent women. The "children of Sanchez" are only poor—they have the intelligence to understand the gleaming magazine, radio and television advertising for \$500 washing machines.

The poor but perfectionist housewife the world over shares the heartfelt cry of one Mexican woman, who, after using the Walton machine, called out for her eldest son: "Now, Pedro, you do it!"

The uniqueness in the Walton invention is its unassuming appearance and simple efficiency of action to fill a greater need for more people the world over than can ever be filled in their time by the fancier atom or laser. Recognition should be given for an inventor who both had the knowledge and the understanding to create a device which our sophisticated society might reject as being as meaningful as the cotton gin was in its time, but actually could be equally explosive to the statistically many more "financially frustrated," but aware people of today.

To invent backwards, providing a helping hand to the "other side of the tracks" people all over the world may represent the greatest stimulus to world peace that capitalism can provide. The ramparts of Rome fell to people who didn't know that they were people "on the other side of the tracks" until Rome let them know it. Rome did not have the resources to satisfy their needs. We do have the resources if applied properly, even though modern worldwide advertising has educated the poor to the sadness of their lot more than any time in history.

Mr. Walton has made a significant contribution. Let's hope that inventors and industry will provide more.

* * *

WE HAVE WORKED WITH DICK * very closely for the last eight years on

* Quoted from a third letter forwarded by Mr. Williams from Allen Koplin, President of Hydraxtor Company of Chicago.

various projects, and although nothing has come to fruition as far as a commercial product, we have great hopes in the very near future for his air separation on cotton pieces to come into being. We plan to call this unit the "Hydrafeeder," and it should have a rather revolutionary effect as far as high-production laundries are concerned.

There is also a great possibility for this in the textile field, wherein they feed different types of small pieces into folding equipment. The other applications for the textile field would be handled through United Shoe Machinery.

We are also working with Dick in several other areas; namely, washing equipment and also in the adaptation of a new constant tension spring in a retracting mechanism for continuous towel cabinets. This spring arrangement will be something that will be the subject of a new patent very shortly.

Our company has been exposed to many inventors over the past, and it is only through such an exposure that one can realize what talent and insight a man like Dick Walton has. To say he is unique would be putting it in its mildest form, because there has never been anyone who combines the talents for recognizing need, coming up with a rather simple solution, and then having the ability to sell these to large corporations. So many people have the talent to develop, but not the ability to sell, which, of course, has killed many very fine inventions.

WE WISH TO NOMINATE FOR PTC'S INVENTOR OF THE YEAR AWARD a distinguished English scientist, Francis T. Bacon,* whose work on fuel cells provided the breakthrough that led directly to development of the hydrogen-oxygen fuel cell chosen by NASA to provide on-board power for the U.S. Apollo spacecraft.

Mr. Bacon holds a total of six U.S. patents on inventions resulting in major advances in fuel cell technology. We are enclosing copies of three of these that relate to the achievements which paved the way for the Apollo fuel cell power plant.

**Francis T.
Bacon**

A direct descendant of Sir Francis Bacon, Mr. Bacon in 1932 on his own initiative began to investigate all

* The above nomination letter was sent in by Anthony M. Moos, Vice President of Leeson Moos Laboratories, Great Neck, New York.

the work that had been done in this field dating back to 1839, when a hydrogen-oxygen cell was first described by Sir William Grove. While some progress had been made in the intervening years, the fuel cell was far from being a practical device and Mr. Bacon decided that the time was ripe for a renewed attack on the problem.

In 1940, Merz & Mclellan, (a U. K. investment house) arranged for the work to be continued at King's College, University of London, but because of World War II the program was discontinued in 1941. It restarted in 1946, at the University of Cambridge and in 1956 the National Research Development Corporation, established under an Act of Parliament for the purpose of securing the development and commercial exploitation of significant inventions, took over sponsorship of the program and was assigned Bacon's fuel cell patents.

Our purpose in giving you this background information in detail is to indicate that Mr. Bacon's work was carried out at distinguished institutions, under sponsorship of the highest quality. This is some evidence of Mr. Bacon's character and, having known him personally for ten years, I can vouch for his integrity as a man and as a scientist. In 1965, for his work on hydrogen-oxygen fuel cells, Mr. Bacon was the recipient of England's Royal Society S. G. Brown award.

You may be interested to know how Mr. Bacon's work and patents came to the attention of Leeson Moos Laboratories. In the mid-Fifties, our organization saw great growth potential in packaged power sources and after surveying here and abroad all the work achieved in that area we determined that Bacon's hydrogen-oxygen fuel cell was the most advanced. As a result, we entered into a contract with National Research Development Corporation to carry out a joint fuel cell development program, and in 1958 we became exclusive American licensee of the Bacon fuel cell.

By the following year, our fuel cell research had progressed to the point where it was necessary to decide whether engineering and manufacturing would be carried out at the Laboratories or be licensed out to another company. In the interest of expediting the program, the latter path was chosen and in August, 1959, we licensed the Pratt & Whitney Division of United Aircraft Corporation to carry out the engineering and manufacturing aspects of the program, while we concentrated on basic research.

The cooperative venture proved fruitful. In 1961, the National Aeronautics and Space Administration selected the fuel cell that emerged from these joint research and engineering efforts for the Apollo moon shot.

Currently, the emphasis on the three way program (in January, Leeson Moos, Pratt & Whitney and Energy Conversion, Ltd., a consortium made up of National Research and Development Corporation and three other British companies extended their cooperative venture to 1984) has been shifted from hydrogen-oxygen fuel cells for military applications to fuel cells using carbonaceous fuels for commercial applications.

Educated at Eton College and Cambridge University, Mr. Bacon received a B.A., Mechanical Sciences Tripos in 1925 and an M.A. in Mechanical Engineering in 1946. In 1947 he became an Associate Member of the Institute of Mechanical Engineers. On February 7, 1967, Mr. Bacon was awarded the Order of the British Empire at Buckingham Palace. He is at present consultant on fuel cells to Energy Conversion Ltd. in Middlesex.

OWENS-ILLINOIS DESIRES TO NOMINATE one of its employees, Mr. Orville B. Sherman, * a resident of Maumee, Ohio, for consideration as the Inventor of the Year. Mr. Sherman is the inventor of a unique process for blow-molding plastic containers. This process of blow-molding containers is one which is used exclusively in the United States by Owens-Illinois and has been a significant factor in permitting Owens-Illinois to achieve a competitive position in the blow-molding industry.

The basic method is set forth in United States Letters Patent No. 3,114,594, issued December 17, 1963, (copy attached).

According to Mr. Sherman's method, an injection mold defining a neck cavity is positioned over the orifice of an extrusion die. Heated thermoplastic material is injection-molded in the cavity to form the threaded neck or finish portion of the container being formed.

Orville B.
Sherman

Thereafter, a length of tubing integral with such finish portion is extruded and enclosed within a partible blow-mold. A pressured fluid, normally compressed air, is then introduced in the mold enclosed tubing to expand such tubing into conformity with the cavity of the blow-mold, thus forming the finished container.

* W. A. Schaich, Vice President and Director of Patents of Owens-Illinois, Toledo, Ohio, sent in the above letter of nomination.

The advantages of Mr. Sherman's process may be seen by outlining those features which are considered important in the industry, particularly those features relating to the quality of the containers and to the efficiency of production.

One of the features most important to the blow-molding industry is to mold containers in which all wall portions have nearly the same wall thickness. Thus, if portions of the walls are too thick, it is obvious that the relatively expensive plastic molding material is being wasted. On the other hand, if some portions of the container walls are too thin, the container simply will not be satisfactory. The Sherman process in which the neck portion is injection-molded and an integrally formed length of tubing is subsequently extruded admirably lends itself to conditioning the tubing in one of numerous ways to ensure that the finished article will have a relatively uniform wall thickness.

An indication of the significance of the Sherman process for molding blown plastic containers may be had by considering the growth of the plastic molding industry generally and, more particularly, the significance of the Sherman process in the growth of such industry.

Within a nine-month period during the years 1958 and 1959, the entire liquid detergent market converted from metal and glass containers to plastic containers. Containers produced by the Sherman process were in the forefront of such conversion. Since that time, many other products have turned to plastic containers for their packaging medium.

The continuing growth of the plastics industry may be seen from a Department of Commerce report which indicates that during 1965, 251 million pounds of plastic were used in the molding of plastic containers and that the use in 1966 is estimated to exceed 300 million pounds. Converted to units, in 1965 alone, over two billion plastic containers were produced in such product areas as household chemicals, toiletries and cosmetics, medicinal health, industrial chemicals and specialties, food and beverage, and automotive and marine products. It is estimated that literally billions of plastic containers have been produced using the Sherman process.

When one considers that blown plastic containers are items which are well known to every American—finding their way to every American household—it is our belief that the inventor of this process which materially contributed to the success of the plastic blow-molding industry deserves serious consideration from the Committee as Inventor of the Year. It is for that reason that we submit, for your consideration, the name of Orville B. Sherman.

I WOULD PROPOSE BERT N. ADAMS* for consideration for the award. As you know, he is the inventor of the non-rechargeable battery which was involved in the successful suit in the Court of Claims, affirmed in February by the Supreme Court.

Adams apparently is representative of the "garret inventor," a vanishing species. He also appears to have measured up to one definition of an inventor—a fellow who didn't know a certain thing couldn't be done and who accordingly went ahead and did it.

Bert N.
Adams

A further factor in Adams' favor is the reported insistence of certain battery experts that such a battery as Adams proposed could not be made to work.

The following material appeared in the *APLA Bulletin*:**

Now, as for the history of the Adams Case, actually Bert Adams came to us about 1956, and in 1957 we petitioned the Army for an administrative award, which was turned down about 1958 or 1959. And shortly afterwards, at the beginning of 1960, we filed suit in the Court of Claims. . . .

At the trial before Judge Lane in the Court of Claims, we had three witnesses. We put on Mr. Adams, the inventor; Mrs. Adams, his wife; and our expert, Dr. Mantell.

Mr. Adams was a very interesting witness, I have always felt. As you know, he was completely self-taught. . . .

He testified, for example, that cuprous chloride, which as most people will agree, is almost completely insoluble in water, was soluble in water.

He testified that magnesium, which is generally regarded as being substantially insoluble in water, was soluble in water.

He testified that water, which is generally regarded as being a fairly effective non-conductor, was a perfectly good electrolyte.

We thought it was just as well to bring that out on direct (sic).

Of course the really funny thing is that he is the only one who is right.

And then after Mr. Adams left the stand, we put on Mrs. Adams. And I must say, although I haven't had the opinion of the people who heard her, that I felt her testimony was quite effective.

We put her on primarily because we were not sure what position the government would take on its references and we wanted to prove an early date for the invention, and Mrs. Adams had knowledge of that, because she had been responsible for getting the materials for Bert and she had assisted him in his experiments. She was the one who had kept the records of the amperage and voltage that his test batteries put out.

* The above letter of nomination was submitted by Thomas M. Ferrill, Jr., of Philadelphia.

** An account of the Adams infringement trial as given by his patent counsel, John A. Reilly, at an APLA meeting and reprinted in part from the *APLA Bulletin*, (October-November 1966).

She was a very sincere and a very appealing witness.

She testified to some of the things that had happened to her. When Bert was making his cuprous chloride and mixing in the carbon on

She also told how Bert had made little batteries. How he put them together and wired a small electric bulb to them. This is where we got the idea for the demonstration that we are going to show you in a few moments. That he had added water to them, of course, and then in order to keep a record of their output he would take them into the bedroom at night. Mrs. Adams said that all night long there were eight or nine of these little batteries sitting around the bedroom with their unwinking little lights blinking, or not blinking, and she said it was sort of like having a Christmas tree in the bedroom every night.

And then, of course, at the very end of her testimony she told how Mr. Adams had gone to the government, to the Army and the Navy, just after Pearl Harbor and how he had spent some three years making batteries for the government, and going back and forth to Fort Monmouth delivering batteries, and having discussions with the battery experts at Fort Monmouth. She said very simply that she felt he had been bitterly discouraged. When she left the stand, I thought she had made a very effective presentation and in a simple way, a rather dramatic one. . . .

Then we put on our expert Dr. Charles Mantell, who I thought did a superb job.

A great deal of the presentation in the courtroom was *al fresco*. It had to be. We were not able to obtain sample batteries in advance that we could disassemble and analyze.

So Dr. Mantell did a great deal of his work in analyzing the batteries right on the witness stand using his penknife and a pair of pliers, which, as I recall, we borrowed from the Court, and did his testifying right off the top of his head, so to speak.

We also made up our infringement charts directly before the Court. They were not pre-designed or done up in advance.

At one point in the testimony—and I will show you the chart of this later on—we found a small drawing in one of the government's production documents which indicated the results of an experiment that they had made with the Adams battery. And Dr. Mantell found two curves—or rather performance figures on a battery that was the best type the government could procure at that time from commercial sources, and directly at the trial he cross-plotted the two curves against the one that the government had made of the Adams battery. . . .

And we contrasted these curves with the curve of the Adams battery, and you didn't have to be a battery expert to be able to appreciate the tremendous contribution that Bert Adams had made. This man who knew nothing about battery theory, self-taught in the field of electrochemistry, the man who said water was a good conductor, and cuprous chloride and magnesium were soluble in it. There, on the chart, is your answer. He is the only one who is right. And the importance of his contribution affects all our lives today.

NOTES

Copyright Booklet for Young People Published by Institute

"The 'C' in the Circle," first in a new series of educational copyright booklets for young people, has just been published by the Institute. Presented in an attractive format, it describes briefly the purposes of the copyright system, the

history of the system and summarizes procedure and the ways in which copyrights touch the life of every young person.

Copies may be obtained at a nominal fee from the Institute's office.

New Members Appointed to Advisory Council

Helge Holst, President of the American Tool and Machine Company, Boston, and J. Russell Wilson, Vice President of Monsanto Company of St. Louis, have been appointed to the Advisory Council of the Institute for three year terms effective in April 1967.

The Advisory Council advises and assists in determining policies and in formulating and carrying out specific programs of work. They represent different fields of activity, such as the fields of commerce, education, science, manufacturing, finance, labor and the professions.

Japanese Group Visits Institute

A mutually beneficial exchange took place on the eleventh of April 1967 when the Institute was host to a group of members of the Japanese System Study Team to Europe and the U.S.

The Japanese were interested in learning about our patent system

and about the work of the Institute with a view to improving their own system. The Institute, in turn, was interested in gathering information on the Japanese system, particularly those aspects that might relate to the recommendations in the recent report of the President's Commission on the Patent System.

New Guide on East-West Trade Published

The most recent one-page guide distributed by the Institute in its series entitled "What Do You Know About . . ." deals with "Patents, Trademarks and Copyrights in East-West Trade." The

series is intended for busy executives and professional people as an easy reference aid to patent and related information in the Institute's published sources. Copies are available on request at the Institute's office.

Inventors' Certificates and Industrial Property Rights

JOSEPH M. LIGHTMAN*

SUMMARY

THIS ARTICLE ANALYZES PAST AND PRESENT TRENDS regarding inventors' certificates, a form of recognition for inventions used extensively in the the Soviet Union and, on a lesser scale, in Bulgaria, Poland and Rumania, although embodying no proprietary rights in an invention as does a patent. The article notes that in recent years the United International Bureaux for the Protection of Intellectual Property (BIRPI) and a leading private international organization, The International Association for the Protection of Industrial Property (AIPPI), have made proposals to the effect that inventor's certificate applications be recognized for right of priority purposes under the Convention of Paris for the Protection of Industrial Property. The President's Commission on the U.S. patent system has also made such a recommendation.

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Other developments are evaluated leading up to the recent Stockholm Conference which adopted an amendment to the Convention's "right of priority", Article 4. The amendment specifies that inventor's certificate applications filed in member countries shall give rise to a right of priority under Article 4 and that an inventor's certificate applicant shall have a right of priority based on his first filed patent, utility model or inventor's certificate application. The amendment is applicable only to those Convention member "inventor's certificate" countries which also have a patent system. It is noted that the subject of inventors' certificates will be taken up in detail at the Revision Conference of the Paris Convention to be held in Vienna in 1970, and that BIRPI is already undertaking preparatory studies for this purpose.

The article concludes that the recognition of inventors' certificates within the Paris Convention context for right of priority purposes is a significant step in East-West relations in the industrial property field. It is essential, however, that the ability of United States nationals to acquire patent rights in these countries is not diminished and that the distinction between inventors' certificates and patents is maintained within the Convention's framework.

INTRODUCTION

ALTHOUGH OUR KNOWLEDGE OF EASTERN EUROPEAN INDUSTRIAL PROPERTY SYSTEMS has increased considerably in the past decade, there is still relatively little information available on practical experiences under these countries' laws. Perhaps the least known aspect of Eastern European systems is the so-called "inventor's certificate,"¹ a form of recognition for inventors widely used in the USSR and in some of the other Eastern European countries.

In such countries, an inventor can, under certain conditions, apply either for a patent or for an inventor's certificate.² The application for either is generally the same, in that it must describe the invention

¹ The expression "author's certificate" has been used in many earlier translations and publications concerning Eastern European laws. In recent years, however, the term "inventor's certificate" has been adopted in publications to avoid confusion with copyrights.

² This choice however is virtually meaningless for most inventors in these countries where the economic system is such that inventors' certificates are the only form of recognition administratively practical, or, in many instances, available to them.

with appropriate drawings and specifications. Also, the examination for novelty is generally the same; although there may be somewhat different prior art criteria and utilization requirements for the two types of documents. If an application is allowed, the inventor is granted an inventor's certificate or patent, depending on what he applied for.

The legal effects of the two types of recognition are different. The inventor's certificate conveys no ownership rights or exclusive rights with respect to the invention; the invention and rights to its exploitation belong to the State. The inventor has the right to a financial reward and other special privileges, based on the invention's use, savings to the economy and other factors (see Chart I appended). If, on the other hand, the inventor should elect to receive, and does receive, a patent, he thereby acquires a legal monopoly or proprietary right to keep others from exploiting the invention without his permission. Legally he may assign or license his rights, as in the case of patent owners in Western European countries. In Eastern Europe, however, inasmuch as there is no private enterprise, the patentee is left only with the possibility of concluding a licensing agreement with a State enterprise. Also, if the invention is needed by the State and no agreement with the inventor is reached, he is in effect subject to a compulsory license at compensation to be established by the State.

Although the inventor does have the theoretical option in these Eastern European countries to apply for a patent or for an inventor's certificate, conditions are such that inventors' certificates are chosen almost universally by local citizens in the USSR and also on a large scale in Bulgaria and Rumania. As the holder of an inventor's certificate, the recipient is entitled to certain compensation and privileges, with the State undertaking exploitation of the invention. As a patent holder, the local citizen of any one of these countries is left to his own resources, and in the absence of private enterprise, he is not in any position to exploit the invention himself. Also, unlike a patent, an inventor's certificate requires no fees of any kind.

Generally, an inventor who develops an invention in the course of his work in a State-enterprise project (or with State aid) can only apply for an inventor's certificate, and not a patent, thereon. Furthermore, inventors' certificates, not patents, are the only forms of official recognition that can be acquired for certain subject matter, such as foods, medicines and techniques for treating diseases. On the other hand, practically all of the few patents issued are to foreigners. Foreigners who do apply for rights to their inventions in these

countries are not generally interested in inventors' certificates since they convey no proprietary rights and are primarily adaptable in terms of their benefits only to local nationals. Foreigners who do apply in these countries seek patents in most cases. In the USSR, Bulgaria and Rumania, where the dual system of patents and inventors' certificates is more fully established, well over 95 percent of all applications filed are for the latter (see Table 1).

This article will discuss the emerging importance of inventors' certificates in the international context, including the most recent developments relating thereto at the Intellectual Property Conference which took place in Stockholm from June 11 to July 14, 1967. In this connection, it will trace the evolution of the inventor's certificate system to its present day status and draw a number of conclusions relating to future aspects of this subject. In keeping with The Patent, Trademark, and Copyright Research Institute's policy of spotlighting important problem areas in the industrial property rights field, this article is intended to afford the readers of *IDEA* some new insights into the subject of "inventors' certificates."

EVOLUTION OF THE INVENTOR'S CERTIFICATE SYSTEM

A form of inventor's certificate appears to have existed as early as 1791, reportedly in a French law providing for dedication of inventions to the State, subject to a reward for the State's use of it.³ It has also been contended that inventor's certificates have concepts similar to certain long accepted principles of most world patent laws which enable the State to own patents, order compulsory licenses or utilize inventions at its own choosing in the public interest.

The present form of "inventor's certificate" as we know it, however, is an Eastern European phenomenon. It was initiated by the USSR as one of its State Planning techniques, intended at the time to stimulate more creative activity from the so-called "worker-inventor."

After the Russian Revolution, the Soviet government in 1919 confiscated all forms of patents. All usefully recognized inventions were declared to be the property of the State, with the inventors to receive some form of guaranteed payment based on their use.

³ *Report of Study Group on Certificates of Authorship* (Geneva, January 27 to 30, 1964), (Geneva: United International Bureaux for the Protection of Intellectual Property [BIRPI], 1964), p. 79.

PATENT APPLICATIONS FILED IN, AND PATENTS GRANTED BY, EASTERN EUROPEAN COUNTRIES TO OWN NATIONALS AND TO FOREIGNERS, WITH SUPPLEMENTAL INFORMATION ON INVENTORS' CERTIFICATES, 1963-65

Source: "Yearly Statistical Summaries," published in *Industrial Property* by the United International Bureaux for Protection of Intellectual Property (BIRPI), Geneva.

^a In 1964, 1016 inventor's certificate applications were filed (936 by nationals; 80 by foreigners); 294 were issued (253 to nationals; 41 to foreigners).

^b In 1964, 1345 inventors' certificate applications were filed (1253 to nationals and 92 to foreigners); no information is available on grants. In 1965, 1348 inventors' certificate applications were filed (1263 to nationals and 85 to foreigners); 877 were issued (792 to nationals and 85 to foreigners).

^c These figures include both patents and inventors' certificates; over 90% of applications and grants are for inventors' certificates.

^d Reported as all patents.

Source: "Yearly Statistical Summaries," published in *Industrial Property* by the United International Bureaux for Protection of Intellectual Property (BIRPI), Geneva.

^a In 1964, 1016 inventor's certificate applications were filed (936 by and 85 to foreigners); 877 were issued (792 to nationals and 85 to foreigners).

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^d Reported as all patents.

A few years later, however, the Soviets found it necessary to make some statutory provision for the acquisition of patents. The need to encourage trade with foreign countries by enabling them to possess proprietary rights to inventions in the USSR was a prime motivating factor. In 1924, a new patent law was promulgated patterned substantially along the lines of the German law; it provided protection for the exclusive rights of the patent owner in the Soviet Union for a fixed period of time.

The enthusiasm generated by the Soviet government for the First Five Year Plan (1928), however, witnessed a flood of proposals from 1928 to 1930 from inventors of new technology which they believed would be of great value to the economy. It became necessary for the government not only to process these proposals through the patent system but to expedite their possible utilization on a national scale. The 1924 patent law was not equipped for this purpose and it was necessary to institute a new system somewhat different from that of Germany and other industrialized countries. The Party's Central Committee issued a Decree in October 1930 abolishing the existing patent law for a new one which would assure "stimulation, development and utilization of important inventions in the USSR."⁴

The existing law's patent provisions were substantially retained in a new patent law of 1931 but the new law incorporated a peculiar feature which characterizes the Soviet system relating to inventions, i.e., the "inventor's certificate" as a substitute for a patent. In effect, a dual system of affording official recognition of rights to inventions was initiated, and continues to exist, in Soviet law. The new law also provided special machinery for bringing an invention promptly to the attention of the Soviet enterprise which would be its prospective user. The 1931 law remained in force until it was superseded by a law of March 5, 1941. On April 24, 1959 the Council of Ministers issued a Decree (No. 435) approving a new law relating to inventions and patents and a regulation on compensation. This basic 1959 law, which is presently in force, with a few Decree amendments from 1961 through 1965, incorporates the dual patent and "inventor's certificate" system as we know it today.⁵

⁴ "The Principles of Soviet Patent Law and Social Organization of Inventions in the U.S.S.R.," by V. G. Olkhovsky, 17 *JPOS* 570.

⁵ See *Industrial Property* published by United International Bureaux for the Protection of Intellectual Property, Geneva, No. 4 (April 1967). Part I on Fundamentals of Civil Legislation, Part II on Decrees and Part III on the Statute itself appear on pp. 77-89.

THE PRESENT SYSTEM IN EASTERN EUROPE

The inventor's certificate in the USSR does not convey or recognize any exclusive right to the inventor to use the invention he devised. The invention belongs to the State and the inventor's application for a certificate constitutes an offer of his invention to the State for its use. When a certificate is issued, the inventor is entitled to certain compensation or reward and to other privileges and status (see Chart I). The compensation to the inventor is a financial calculation based on the savings or earnings achieved by State enterprises which have used his invention (see Table 2).

TABLE 2
COMPENSATION PAYMENTS ESTABLISHED BY USSR FOR INVENTIONS AND
INNOVATIONS USED BY THE GOVERNMENT

Amount of Annual Savings in Rubles	Compensation for Inventions	Compensation for Innovation Proposals
Up to 100	25% of the savings but not less than 20 rubles	13.75% of the savings but not less than 10 rubles
100-500	15% plus 10 rubles	7% plus 10 rubles
500-1,000	12% plus 25 rubles	5% plus 20 rubles
1,000-5,000	10% plus 45 rubles	2.75% plus 45 rubles
5,000-10,000	6% plus 250 rubles	2% plus 85 rubles
10,000-25,000	5% plus 350 rubles	1.75% plus 110 rubles
25,000-50,000	4% plus 600 rubles	1.25% plus 235 rubles
50,000-100,000	3% plus 1,100 rubles	1% plus 360 rubles
over 100,000	2% plus 2,100 rubles but not more than 20,000 rubles	0.5% plus 860 rubles but not more than 5,000 rubles

Source: P. J. Federico, "Soviet Law on Inventions and Patents," 43 *JPOS*, 36.

Protection of Invention in the USSR: Basic Principles, published by Committee for Inventions and Discoveries Attached to the Council of Ministers of the USSR (Moscow 1966), pp 58-61.

Note: In addition to compensating inventor's certificate holders for their inventions, Soviet law also provides payments for use of "innovation proposals" submitted by individuals and used by Soviet organizations. "Innovation proposals" consist generally of the type of technology which might not ordinarily be patentable under the laws of most countries; they may be described as proposals for improvement of technical equipment, products and production methods. The above compensation, indicated in columns two and three, is paid on the basis of calculations of the savings during the first year of use, but a certain amount is to be paid within one month from the date when the plan for adoption was approved, with the balance, based on actual use, paid after the expiration of the year. If the savings for the following years are greater, then an additional payment is to be made; in the case of inventions, on the basis of the highest year of the next four years, and in the case of innovations, on the basis of the second year only.

There are no fees of any kind in connection with inventors' certificates, whereas fees are due for patents. The privileges and status for an inventor's certificate holder, in some cases automatic and in others not, include such things as partial exemption from income taxes, better living quarters, and job advancements. The inventor also achieves the right to have the invention bear his name, for whatever this may be worth to him as a status symbol.

The inventor's certificate system has been compared in part with employee suggestion systems commonly used by many American companies, both for inventions and minor improvements, but in the Soviet Union it exists on a nationwide basis and is operated by the State. In addition to this system, the Soviets also have in effect a local suggestion system, operating on a plant or regional basis, for minor improvements. In such instances, the head of the enterprise may award certain compensation at his discretion.

An inventor's certificate embodies no fixed duration (a patent is issued for 15 years from the application filing date). Under Soviet law, a patent owner may exchange his patent for an inventor's certificate provided (1) his patent has not expired; (2) he is not more than six months delinquent in payments of his renewal fees; and (3) the patent has not been licensed or assigned.⁶

In the USSR, the percentage of inventor's certificate applications rejected to those filed is high. The latest available published figures on rejections are as of 1963 and include patent as well as inventors' certificate applications. They show that in 1960, only about 22 percent of the total applications filed were registered as inventors' certificates or patents. In 1961 the rate dropped to about 19 percent; in 1962 to about 15 percent and in 1963 to about 12 percent.⁷ Well over 90 percent of all applications filed in the USSR are for inventors' certificates. The high rejection rate may be explained—inventor applications are too often submitted without being properly prepared. Many are disposed of by the authorities on preliminary examination and most of the others for lack of novelty.

Most inventor's certificate applications are filed by private persons, the percentage filed by State enterprises being comparatively low.⁸ No fees are payable for an inventor's certificate application and the formalities for preparing one are fairly simple; an application may

⁶ Instructions of May 30, 1961 (see *Industrial Property*, *op. cit. supra* note 5, No. 5, [May 1966], p. 110.)

⁷ *Industrial Property*, *op. cit. supra* note 5, No. 8 (August 1964), pp. 162-3.

⁸ *Ibid.*, p. 163.

usually be prepared by the inventor himself without legal help. Inventors therefore apparently submit their applications in many instances with little knowledge of the prior art, no preliminary search and little, if any, attention being paid to the proper preparation of the application in the first place.

So far as the "inventor's certificate" situation in other Eastern European countries is concerned, mention will first be made of the regional activities applicable to the subject that were undertaken in COMECON⁹ beginning in 1959. In that year, the participating countries held a conference in Berlin and established three working groups to undertake studies relating to suggested improvements and harmonization of their industrial property laws. Working group number I¹⁰ on inventions, innovations and novelty examinations, made a number of detailed recommendations on legal and administrative treatment to be accorded inventions by the member countries. The group recommended, among other things, that all of the countries include the dual system of inventors' certificates and patents within their systems.¹¹

As indicated in the appendix (Chart I), Bulgaria, Poland and Rumania also have laws which give inventors the option of choosing either an inventor's certificate or a patent, and which provide financial and other benefits to inventor's certificate holders based on the State's utilization of their inventions. In these countries, the State retains the right to assimilate such inventors' certificates to patents and to seek patent protection on the subject matter thereon abroad. In this connection, the State may affirm its right to an invention on which an inventor's certificate has been issued by also assuming a patent thereon in its own name. Czechoslovakia has a law providing a very limited system of inventor's certificate recognition, and Hungary and Yugoslavia abolished their systems in 1957 and 1960, respectively.

Table I cited above shows that most of the patents applied for in the dual system countries are by foreigners. Foreigners obtain few inventors' certificates in these countries since they are much less meaningful in terms of the benefits to be derived. In the first place, it is not certain that payments to a Western inventor under an inventor's certificate will be convertible into his currency. Also, the cash payments for inventor's certificate holders are limited by established

⁹ For further details on COMECON, its membership and activities in the industrial property field, see *IDEA*, Vol. 10, No. 4 (Winter 1966-67), p. 468.

¹⁰ Secretariat for this working group was provided by the Soviet State Committee for Inventions and Discoveries.

¹¹ *Industrial Property*, *op. cit. supra* note 5, No. 8 (August 1965), p. 178.

ceilings, and the various fringe benefits, such as better jobs, housing, et cetera, are of little or no importance to a foreign inventor. Foreigners who are interested in the possibility of exploiting their inventions in these countries generally apply for patents, since they entail a form of legally recognized ownership in these countries that presumably can be licensed and protected against infringement.¹² Although Western interest in patent licensing and technical interchange arrangements with Eastern European countries is growing, patent application filings by Westerners are still low in the dual system countries.

EMERGENCE OF INVENTOR'S CERTIFICATES IN THE INTERNATIONAL CONTEXT

Before the last Revision Conference of the Paris Industrial Property Convention, held at Lisbon in 1958, little attention was paid to this subject (in fact little was known about it) outside Eastern Europe. At that Conference, Rumania led several other Eastern European delegations in introducing proposals relating to inventor's certificates (the USSR was not a member of the Paris Convention at the time; it adhered in July, 1965).¹³ One proposal was to add this "expression" to Convention Article 1 (4), which lists various kinds of patents; the other was to amend Convention Article 4 (on "right of priority" to provide that inventor's certificate applications would rank equally with patent applications for purposes of establishing a "right of priority." The United States and several other Western delegations opposed these proposals, noting that not much was known about the actual operation and significance of inventor's certificates and that a more detailed study of the matter was needed before it could be considered further.¹⁴ This view was supported by a majority of the Conference

¹² This does not mean that foreigners completely ignore the possibility of acquiring inventors' certificates. In some instances, they may see fit to apply for such recognition for what it may be worth to them where no patenting is possible (e.g., foodstuffs and pharmaceuticals) or for other reasons. In recent years, the USSR has reportedly received a number of such applications from Western Europe and the U.S. In 1963, 135 inventor's certificate applications were filed by foreigners; 395 were filed in 1964 and the filings reportedly reached 1250 in 1965 (M. Boguslavsky and I. Chervigkov, *Protection of Industrial Property in U.S.S.R.*, [Novosti Press Agency Publishing House: 1966].)

¹³ All Eastern European countries, except Albania, are now Convention members.

¹⁴ *International Convention—Patents & Trademarks*, The U.S. Official Delegation Report to the Conference of Lisbon in Hearings before House Judiciary Committee, Subcommittee No. 3 on H.R. 5754 and H.R. 7347 to implement Lisbon

delegates. In deciding not to accept these Eastern European proposals, however, because of inadequate knowledge of the subject matter, the Conference emphasized that this decision should not be construed as an implied rejection of the subject matter itself.

The United International Bureaux for the Protection of Intellectual Property (BIRPI), which administers the Paris Convention, among others, later undertook a number of studies, including the convening of an Intergovernmental Study Group (January 1964) and of a Committee of Experts (March 1965) on the subject. Subsequent to, and as a result of these meetings, the matter was included on the agenda of the Stockholm Intellectual Property Conference, which met from June 11 to July 14, 1967. The action taken on this subject at the Conference will be discussed further, in detail.

The USSR adherence to the Paris Industrial Property Convention in July 1965, also created a growing realization among Western countries that the inventor's certificate system had now become a factor to be accorded active consideration in the international context. In the United States this subject was considered by the President's Commission on the Patent System which recommended in its *Report* of November 17, 1966, that "To promote more harmonious international relations, particularly with regard to the protection of industrial property: The United States should take a position in favor of the proposed revision of the Paris Convention whereby a right of priority may be based on an application for an inventor's certificate."¹⁵

A number of leading private international groups had also become more interested in the international aspects of inventors' certificates. The International Association for the Protection of Industrial Property (AIPPI), the International Chamber of Commerce (ICC) and the International Federation of Patent Agents (IFPA) participated as observers at the previously mentioned BIRPI Committee of Experts meeting in Geneva in March 1965. At its XXVIth Congress in Tokyo in April 1966, the AIPPI adopted a resolution, among others, calling for an amendment of the Paris Convention's Article 4, whereby (1) an inventor's certificate application would "engender" a right of priority for purposes of filing for an inventor's certificate or patent application in another Convention country and, conversely, (2) an inventors' certificate applicant could claim a right of priority based on his first filed patent application in a Convention country. These right of priority

Revision of October 31, 1958 (June 15, 1961), p. 82.

¹⁵ Recommendation XXXIII, (p. 54) of *Report of the President's Commission on the Patent System* (Washington, D. C.: G.P.O. 1966).

benefits for inventor's certificate applications were to apply only in those countries which had the dual system or which issued patents. The resolution also called for insertion of the words "inventors' certificates" in Convention Article 1 (2) which defines "industrial property."¹⁶

STOCKHOLM CONFERENCE AMENDS PARIS CONVENTION
"RIGHT OF PRIORITY" ARTICLE TO RECOGNIZE INVENTORS' CERTIFICATES

The BIRPI Study Group on Certificates of Authorship, previously mentioned, which met in Geneva in January 1964, agreed that it would be desirable to study the possibility of revising the Convention so as to accommodate the right of priority provisions in Article 4 to inventors' certificates. The Group itself, consisted of experts from 10 member States (Bulgaria, Czechoslovakia, Hungary, Israel, Netherlands, Poland, Rumania, U.K., U.S. and Yugoslavia); the USSR, not yet a member, attended as an observer.¹⁷ BIRPI then undertook further studies and in March 1965, it convened the aforementioned "Committee of Experts" of representatives from 27 member States, the USSR also attending as an observer. This Committee adopted a draft text dealing with inventors' certificates within the context of Convention Article 4. This text, which was later presented as a proposal¹⁸ for consideration at the Stockholm Intellectual Property Conference, recognized inventor's certificate applications as a basis for claiming priority rights on corresponding patent applications and also provided that a patent application be recognized as a basis for a right of priority for an inventor's certificate application. The provision was also worded to include safeguards against the possibility that a Paris Convention country might offer applicants inventors' certificates only, and not patents.

The Stockholm Conference was originally intended to deal primarily with revisions of the Berne Copyright Convention. It was later decided, however, to add a number of other matters to the agenda, including proposals for amending the Paris Convention's right of

¹⁶ *Industrial Property, op. cit. supra* note 5, No. 6 (June 1966), p. 153.

¹⁷ *Report of Study Group on Certificates of Authorship, op. cit. supra* note 3.

¹⁸ *Intellectual Property Conference of Stockholm, 1967, Proposal for Amending Article 4 of the Convention*, (Prepared by the Government of Sweden with the Assistance of BIRPI), Document S/2 (Geneva: April 15, 1966), pp. 8-12.

priority provisions to include inventors' certificates.¹⁹ The Committee of Experts which met in March 1965, had agreed that any substantive revision relating to this subject beyond Article 4 of the Convention should be postponed until the Convention's Revision Conference scheduled for 1970 in Vienna.

The Stockholm Conference delegates, after considering the proposals brought to their attention, adopted the following text of a new Article 4-I to be incorporated in the Paris Convention:

- (1) Applications for inventors' certificates filed in a country in which applicants have the right to apply at their own option either for a patent or for an inventor's certificate shall give rise to the right of priority provided for by this Article, under the same conditions and with the same effects as applications for patents.
- (2) In a country in which applicants have the right to apply at their own option either for a patent or for an inventor's certificate, an applicant for an inventor's certificate shall, in accordance with the provisions of this Article relating to patent applications, enjoy a right of priority based on an application for a patent, a utility model or an inventor's certificate.

Paragraph (1) is basically similar to the text of the first paragraph in the proposal that was adopted by the AIPPI in its aforementioned resolution and paragraph (2) to the text of the second paragraph in the proposal contained in Stockholm Conference Document S/2, cited in footnote eighteen. The Conference also recommended that any further matters regarding inventors' certificates within the Paris Convention's framework be postponed until the Revision Conference in Vienna in 1970. In this connection, BIRPI agreed to undertake further preparatory studies.

This Stockholm revision of the Convention's Article 4 is consistent with the recommendation of the President's Commission on the Patent System that the United States should support a change in the Convention recognizing an inventor's certificate application as the basis of a right of priority. A decision will have to be made whether to seek implementing legislation concerning this amendment of the Convention or to regard the Convention as self-executing in the United States. The previous Convention revisions adopted at Lisbon in 1958 were implemented by specific legislation enacted by Congress.

¹⁹ In addition to the Berne Copyright Convention Revision and the above amendment of Paris Convention Article 4, the Conference agenda included proposals for structural and administrative reforms of the Conventions administered by BIRPI and for adoption of a new World Intellectual Property Organization (WIPO).

CONCLUSIONS

The recognition of inventors' certificates for right of priority purposes under the Paris Convention may well be the beginning of extensive consideration to be given this subject in international contexts. It is important to bear in mind that patents still play a far lesser role than inventors' certificates as means for rewarding inventors in the USSR and in certain of the other dual system countries. It may be expected, however, at the 1970 Revision Conference of the Paris Union Convention that the subject of inventors' certificates will be proposed for incorporation by Eastern European countries in several other features of the Paris Convention. In such instances it will be essential within the Paris Convention context to maintain safeguards against diminution of rights of nationals of Convention countries to seek patent protection in dual system countries. Here it is to be noted that the text of the amendment to Article 4 adopted at Stockholm is worded to apply the benefits of this article only to those countries which continue to maintain a patent system, whether or not they also have the inventor's certificate system.

Recognition of inventors' certificates for right of priority purposes in the Convention is a significant step in East-West relations in the industrial property rights field. It is important, however, that such recognition entail appropriate commitments by those Paris Convention countries having some other form of recognition for inventions besides patents, also to maintain a patent system within their framework.

CHART I

SALIENT FEATURES OF EASTERN EUROPEAN COUNTRIES' LAWS ON INVENTORS' CERTIFICATES

Country Basic Laws and Decrees	Criteria for Issue; Where No Patenting Permitted	Rights Accorded Holders	Others
<p>Bulgaria</p> <p>Law No. 10 of Feb. 3, 1961 on Discoveries, Inventions, and Schemes for Rationalization.</p>	<p>Inventors' certificates only, not patents, issued in cases where:</p> <ol style="list-style-type: none"> (1) Medicines and foodstuffs <i>not</i> chemically produced are subject matter to be protected; (2) Inventor has made invention in course of his employment with State enterprise; (3) Inventor received financial or other assistance from State enterprise in making invention; (4) Invention concerns new method of treating a disease; and (5) Invention concerns new agricultural processes. 	<ol style="list-style-type: none"> (1) Recognized title of "inventor"; (2) Priority for him and children to enter higher education establishments; (3) Better housing; (4) Longer holidays; (5) Have the invention bear his name; and (6) Cash remuneration based on invention's use. 	<p>An "additional invention" is entitled to an inventor's certificate if it is an improvement on an invention covered by an inventor's certificate not yet 15 years old.</p> <p>Law provides for compulsory conversion of patents to inventors' certificates when:</p> <ol style="list-style-type: none"> (1) Patent considered important to national economy and no agreement reached re: its assignment or licensing to State, or; (2) Patent not worked for three years from date of grant.
<p>Czechoslovakia</p> <p>Law No. 34, July 5, 1957; Decrees of Oct. 26, 1957 (Health) and of April 17, 1958 (Agriculture).</p>	<p>Inventors' certificates issued only for new methods of preventing disease, new varieties of seeds and plants and new methods of breeding.</p>	<p>Only certify "quality of the invention"; have lesser degree of official recognition and importance than in other countries.</p>	
<p>Hungary</p> <p>Decree No. 38/1957 abolished inventors' certificate system.</p>		<p>Inventor's certificate applications in course of processing when Decree was issued could be converted to patent applications. Where inventors' certificates were already in force but where State did not exploit invention, inventor has right to make own licensing</p>	

CHART I—Continued

Country Basic Laws and Decrees	Criteria for Issue; Where No Patenting Permitted	Rights Accorded Holders	Others
<p>Poland</p> <p>Law of May 31, 1962 concerning inventions; also, Ordinance of Oct. 12, 1950 concerning employee's inventions.</p>	<p>Patents and inventors' certificates not issued on chemical or food products; issued only on processes. Where State employee has made invention, it becomes property of State which can patent it. Employee has right in such cases to an inventor's certificate on the invention.</p>	<p>Financial remuneration, based on economic importance of invention, specific type of benefit spelled out in the law.</p>	
<p>Rumania</p> <p>Regulation on Inventors' Certificates No. 943/1950 and on Innovations No. 2267/1953, as amended by No. 1481 of 1957.</p>	<p>Inventors' certificates, not patents, issued, when:</p> <ol style="list-style-type: none"> (1) Invention made at State's request; (2) Invention made collectively and only attributable to State enterprise, not to any one person; and (3) Where inventor offers it to State and latter agrees to use it. 	<p>Holder enjoys rights:</p> <ol style="list-style-type: none"> (1) To title of "author of the invention"; (2) To publicize invention; (3) To use of his name by State when it patents the invention; (4) To financial compensation for invention's use by State; (5) To reimbursement of expenses in developing the invention; and (6) To job promotion and participation in professional training courses and admission to "rest homes." 	

USSR

Council of Ministers Decree No. 435 and Implementing Ordinances of April 24, 1959; Central Committee Ordinance No. 531 of May 20, 1960 and Supreme Soviet.

Principles of Civil Law, approved Dec. 8, 1961. Also, "Instructions" Concerning Exchange of a Patent for a Certificate of Authorship, Order No. 94, and Council of Ministers Decrees from 1961 through 1965.

Inventors' certificates, only, not patents, issued:
(1) If invention made by inventor in course of his duties with the State; or if he has received financial or other State aid for this purpose;
(2) For food and medicinal products obtained by nonchemical processes (neither patent nor inventors' certificate can be obtained on substances derived by chemical processes);
(3) New methods of treating diseases; and
(4) Animal and vegetable breeding techniques.

Holders entitled to:
(1) Remuneration based on State's use of invention;
(2) Priorities for appointment as scientific assistants in research and experimental work re: their specialization, at higher salaries;
(3) Rights to additional living space;
(4) Rights to have invention bear owner's name; and
(5) Exemption from income tax on compensation up to 1,000 rubles.

If invention is made supplementing one already covered by an inventor's certificate not yet 15 years old, the inventor of the new invention can acquire an inventor's certificate on it. After first inventor's certificate expires, the new inventors' certificate can continue in force independently.

Yugoslava

Law of Oct. 31, 1960 repealed system of inventors' certificates.

Under 1960 law, inventor's certificate holders on certain inventions could apply for and receive patents thereon, not to exceed 15 years from date of publication of the inventors' certificate on which patent was based. Otherwise, all inventors' certificates in force on Oct. 31, 1960 lapsed at end of 15 years from their publication date.

Source: *Industrial Property*, published by BIRPI, No. 4 (April 1967), p. 77. *Report of Study Group on Certificates of Authorship*, published by BIRPI (1964) pp. 17-71.

Protection of Industrial Property in the USSR, published in English by Novosti Press Agency Publishing House (1966).

Changing Status of Sole Inventors: A Company Case Study

IRVING H. SIEGEL *

SUMMARY

FREQUENCY DISTRIBUTIONS AND AVERAGES compiled from company data on inventors per patent can contribute to administrative programs for encouraging creative activity by research and other technical personnel. This paper presents and analyses such distributions and averages that have been derived from published information of the largest manufacturer of electronic data-processing equipment.

THIS PAPER CALLS ATTENTION to the administrative potential of simple numerical tools derivable from company data on individual and joint inventors. Used in conjunction with other company informa-

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tion, published and unpublished, these tools have a clear diagnostic and analytical value and could assist in the monitoring of (1) corporate research activity and (2) corporate systems for motivating and remunerating scientific and related personnel. The data we have selected refer to International Business Machine Corporation, a company for which they are readily accessible in published form; but the techniques employed here are obviously adaptable to other organizations too. This paper takes advantage of work done previously by the author on individual and joint patent contributions and already reported by him in *IDEA*¹ and elsewhere.²

The basic data used for our measures and for our discussion are presented in Table 1, where we bring forward to 1967 the distribution of IBM patent awards according to the number of credited inventors. These data have been compiled from the complete file of *IBM Journal*

TABLE 1
PATENT AWARDS TO IBM EMPLOYEES REPORTED IN 1957-1967

Journal Issue ^a	Distribution of Patents by Number of Inventors							
	Total	1	2	3	4	5	6	7
All Issues	3,809	2,514	940	255	78	17	2	3
1967								
July	93	49	29	8	7			
May	49	26	18	3	1	1		
Mar.	105	62	34	8	1			
Jan.	135	76	43	9	5	1		1
1966								
Nov.	53	30	14	8	1			
Sept.	116	63	40	10	2			1
July	106	62	27	12	4	1		
May	108	70	25	7	6			
Mar.	96	50	31	12	3			
Jan.	100	65	25	6	3	1		
1965								
Sept.-Nov.	108	68	30	8	2			
July	86	61	19	4	1	1		
May	66	42	15	6	3			
Mar.	76	49	18	9				
Jan.	63	44	14	5				

¹ See these papers in *IDEA* by I. H. Siegel: "Dominance of Sole Patentees in Computer-Related Technology," Vol. 8, No. 1 (Spring 1964), pp. 45-50; "On Individual and Joint Patent Production," Vol. 6, No. 2 (Summer 1962), pp. 241-260; and "Persistence of the Sole Inventor," Vol. 5, No. 2 (Summer 1961), pp. 144-149. See also the remarks of I. H. Siegel in Vol. 7, Conference Number (1963), pp. 157-160.

² I. H. Siegel, "Distribution of Patents According to Number of Inventors," *1965 Proceedings of the Social Statistics Section of the American Statistical Association*, pp. 38-41.

TABLE 1—Continued

Journal Issue ^a	Distribution of Patents by Number of Inventors							
	Total	1	2	3	4	5	6	7
1964								
Nov.	109	75	25	6	3			
Sept.	114	86	19	6	2	1		
July	38	28	8	2				
April	80	56	20	3	1			
Jan.	63	43	17	3				
1963								
Oct.	88	68	14	4	2			
July	73	53	14	6				
April	129	86	37	5	1			
Jan.	127	86	28	9	4			
1962								
Oct.	150	103	35	5	3	4		
July	89	58	26	5				
April	93	63	24	2	3	1		
Jan.	92	60	23	7	1	1		
1961								
Oct.	99	68	22	6	2	1		
July	83	59	15	6	2	1		
April	83	54	19	7	1		1	1
Jan.	77	53	14	7	1	1	1	
1960								
Oct.	101	71	22	5	3			
July	38	26	10	2				
April	91	61	21	6	2	1		
Jan.	82	57	19	5	1			
1959								
Oct.	66	47	12	5	1	1		
July	65	48	14	3				
April	48	32	8	5	3			
Jan.	86	56	23	5	2			
1958								
Oct.	44	31	11	2				
July	36	28	6	2				
April	35	26	8	1				
Jan.	45	31	12	2				
1957								
Oct.	32	26	6 ^b					
July	28	20	7	1				
April	38	24	8	5	1			
Jan.	27	14	11	2				

^a *IBM Journal of Research and Development*, originally a quarterly but now appearing bimonthly. This table refers to the section on new patent awards and covers the entire *IBM Journal* file to July 1967.

^b Six patents attributed to one inventor "*et al.*" were assumed to be the work of pairs of inventors.

of *Research and Development*, every issue of which includes a list of recent patent grants. Since the *IBM Journal* first appeared in January 1957, the table covers more than a decade of company experience.

A study of this table suggests what simple computations would more quickly reveal—that the structure of inventive activity at IBM has lately been undergoing significant change. Even without additional statistical processing of the data and without application of the standard tests of statistical inference (e.g., the chi-square test for compared frequency distributions), we may observe that sole inventors are giving ground to joint inventors. Individuals, nevertheless, still account for more than half of the patent awards—a dominance that also typifies American industry despite the wide practice of team research and the increasing role of joint invention.

Other information that is publicly available suggests that a partial explanation, at least, of the structural shift is to be found in the taking hold of a company award system that is favorable to joint invention. No doubt, additional “inside” information would provide fuller illumination and enhance the value of the kinds of measures presented here (as well as suggest additional measures) for the guidance of company operations.

THE CHANGING AVERAGE NUMBER OF INVENTORS

Table 2 shows, for the whole *IBM Journal* file and for each year of the period 1957-1967, the average number of inventors per IBM patent and the underlying totals required for the computation. For 1965-1967, a sharp upturn in the average is evident; and the averages for 1966 and 1967 are higher than any recorded for previous years in the documented period.

The increase in the mean number of inventors per patent (to 1.59 in 1966 and 1.62 in 1967) indicates an increase in the relative importance of joint inventors. Table 1 shows, however, that large groups of co-inventors remain rare; thus, only 3 of the 3,809 patents are attributed to groups of 7, and only 2 to groups of 6. It is the duos that are now raising the average, with increasing help from trios and quartets.

THE CHANGING PERCENTAGE DISTRIBUTION

Table 3, which shows percentage distributions for various periods, reflects the temporal shift of the frequency spectrum at IBM toward

TABLE 2
AVERAGE NUMBER OF INVENTORS PER IBM PATENT

Year	Patent Awards	Inventors	Inventors per Patent
All Issues ^a	3,809	5,589	1.47
1967 ^b	382	618	1.62
1966	579	922	1.59
1965	399	581	1.46
1964	404	555	1.37
1963	417	579	1.39
1962	424	615	1.45
1961	342	510	1.49
1960	312	442	1.42
1959	265	380	1.43
1958	160	211	1.32
1957	125	176	1.41

^a Table is based on data reported in all issues of *IBM Journal of Research and Development* from January 1957 to July 1967.

^b Covers four *IBM Journal* issues only (through July); six are scheduled for the year.

higher numbers of inventors per patent. In an earlier paper by the author,³ the distribution derived for the period January 1957 to January 1964 indicated that sole inventors accounted for 68.9 percent of the patents. This figure compares with 62.4 percent for the subsequent interval, as reflected in the *IBM Journal* reports of April 1964 to July 1967; and with 66.0 percent for the whole 11-year period, January 1957-July 1967.

A dramatic decline is shown in Table 3 for the contribution of single patentees in the two most recent years. The percentage falls below 60. Thus the figure derived from the *IBM Journal* issues for 1966 is 58.7; from the available issues for 1967, 55.8

The same table shows definite gains for duos, trios, and quartets to compensate for the diminution in the relative contribution of single inventors. For the earlier and the more recent multiyear intervals of the 11-year period, the figures for duos are 23.1 and 26.7 percent, respectively; for trios, 5.8 and 7.8 percent; and for quartets, 1.6 and 2.7 percent. For 1966 and 1967, the corresponding figures are substantially higher: duos, 28.0 and 32.4 percent, respectively; trios, 9.5 and 7.3 percent; and, quartets, 3.3 and 3.7 percent.

³ *IDEA*, Vol. 8, No. 1 (Spring 1964), p. 47.

TABLE 3
PERCENTAGE DISTRIBUTION OF IBM PATENTS
ACCORDING TO NUMBER OF INVENTORS

Number of Inventors per Patent	All Issues ^a	April 1964- July 1967 ^b	Jan. 1957- Jan. 1964 ^c	Jan.-July 1967 ^d	1966
All inventors	100.0%	100.0%	100.0%	100.0%	100.0%
1 inventor	66.0	62.4	68.9	55.8	58.7
2	24.7	26.7	23.1	32.4	28.0
3	6.7	7.8	5.8	7.3	9.5
4	2.0	2.7	1.6	3.7	3.3
5	0.4	0.4	0.5	0.5	0.3
6	0.1		0.1		
7	0.1			0.3	0.2

^a Based on data reported in *IBM Journal of Research and Development*, June 1957 to July 1967.

^b Based on *IBM Journal* data not included in a distribution published earlier (see footnote c).

^c Shown in *IDEA*, Vol. 8, No. 1 (Spring 1964), p. 47.

^d Based on four *IBM Journal* issues available at time of preparation of present paper.

THE CHANGING THEORETICAL GEOMETRIC DISTRIBUTION

Table 4 shows three percentage distributions computed according to the geometric law, which our earlier work had shown to fit the IBM data well. The three distributions are for the entire period covered by the *IBM Journal* issues of January 1957-July 1967; for the interval covered by the issues of April 1964-July 1967; and for the interval considered by the author in an earlier paper, January 1957-January 1964.⁴

A comparison of the theoretical distributions in Table 4 with the corresponding actual distributions in Table 3 reveals that the geometric formula remains applicable to the composite data. This formula is most economical in its assumptions, in its demand for actual data; it has only one parameter, the actual percentage for one inventor (P_1). Inserting this percentage into

$$P_i = P_1 (1 - P_1)^{i-1}$$

and setting i at 2, 3, . . . , we obtain theoretical figures (P_i) for two, three, and more inventors. In the limit, "at infinity," the derived dis-

⁴ The geometric distribution was computed for IBM data for the period January 1957-January 1964 in *IDEA*, Vol. 8, No. 1 (Spring 1964), p. 45. It is discussed there and in 1965 *Proceedings of the Social Statistics Section* (see *supra* note 2).

TABLE 4
THEORETICAL PERCENTAGE DISTRIBUTIONS OF IBM PATENTS
ACCORDING TO NUMBER OF INVENTORS: GEOMETRIC LAW^a

Number of Inventors per Patent	All Issues ^b	Apr. 1964- July 1967 ^b	Jan. 1957- Jan. 1964 ^b
All inventors	99.9% ^c	99.9% ^c	100.0% ^c
1 inventor	66.0	62.4	68.9
2	22.4	23.5	21.4
3	7.6	8.8	6.7
4	2.6	3.3	2.1
5	0.9	1.2	0.6
6	0.3	0.5	0.2
7	0.1	0.2	0.1

^a One-parameter distribution, $P_i = P_1 (1 - P_1)^{i-1}$, where P_i ($i = 2, 3, \dots$) refers to the theoretical percentage computed for two or more inventors and P_1 (the parameter) refers to the actual percentage for one inventor.

^b The value for P_1 is derived from *IBM Journal* data in Table 1 for one inventor and for all inventors. The remaining percentages (P_2, P_3, \dots) are computed according to the formula shown in footnote a, above.

^c Actual sum of P_1 and the computed percentages for P_2 , etc.; not forced to 100 percent since the 7 categories need not exhaust the total. (The closeness of the actual sum to 100 percent in each instance, however, is an indication of the goodness of fit.)

tribution sums to unity (i.e., 100 percent), as it should. The computed distribution for each time period is also well-behaved, since virtual exhaustion of the total (i.e., 100 percent) is achieved with the seven categories that span the entire actual patent output of IBM.

Like the computations in Table 3, the theoretical distributions in Table 4 reflect the shift from sole to joint invention. Thus, in the distribution for the later period (April 1964-July 1967), the proportions of IBM patents computed for duos, trios, and quartets are higher than the corresponding figures for the earlier period (January 1957-January 1964).

The geometric law need not continue to give a close fit to the actual IBM percentage figures for inventors per patent. It does not, of course, apply to data for all companies; and, where it does apply, a continuing reduction of the actual contribution of sole inventors could eventually lead to an unacceptable variance of the theoretical from the actual figures for joint inventors.

Actual and computed distributions for the most recent biennium, 1966-1967, show that the geometric law remains fairly descriptive of IBM experience despite the brevity of this period and the magnitude of the structural change registered therein:

	Actual	Computed
1 inventor	57.5%	57.5%
2	29.8	24.4
3	8.6	10.4
4	3.4	4.4
5	0.4	1.9
6	0	0.8
7	0.2	0.3

As the contribution of sole patentees declines toward 50 percent and below, the fit may be expected to worsen, and a variant or alternative formula (perhaps a truncated Poisson distribution) will eventually have to be substituted in the calculation.

A PARTIAL EXPLANATION OF THE SHIFT

Other published material sheds some light on the recent change in the mix of sole-joint invention at IBM. Thus, at the 1963 Annual Conference of The PTC Research Institute, the IBM Manager of Domestic Patent Operations told of an award scheme adopted "a little over two years ago" for improvement of the quantity and quality of invention. A payment of \$1,000 is made in each division of the company for an invention "rated as outstanding." Furthermore, "if there are co-inventors, each inventor gets a \$1,000 award."⁵ Another IBM representative, the Director of Technology and Engineering, described the same award scheme at the April 1965 symposium of the 175th Anniversary of the U.S. Patent System.⁶ The generous provision for remunerating co-inventors makes collaborative effort very attractive.

No doubt, other factors have also contributed to the recent change in the structure of patent activity at IBM, and "insiders" are best situated to know what they are. Information on these factors, other details of the award system, and numerical measures of the sort presented in this paper are obviously pertinent to the evaluation and to the management of company research activity and of personnel programs intended to achieve research objectives. In particular, the measures illustrated here merit consideration by other companies concerned about the volume of patent output and the degree of staff participation in inventive activity.

⁵ See remarks of John Hanifin in *IDEA*, Vol. 7, Conference Number, (1963), pp. 132-134.

⁶ J. A. Haddad, "An Executive View of the Employee Inventor," *Journal of the Patent Office Society*, Vol. 47, No.7 (July 1965), p. 476.

FORUM

Although the primary purpose of *IDEA* is to communicate the research work of the Institute, it also serves as an educational vehicle for the exchange of informed opinion. The positions taken by the authors of papers and notes in this section are not necessarily those of the Institute. It is hoped that the material published in this section will stimulate researchers to undertake further study of the issues.

A Realistic Appraisal of the Draft Patent Cooperation Treaty

GERALD D. O'BRIEN*

SUMMARY

THIS PAPER TRACES THE DEVELOPMENT of the draft Patent Cooperation Treaty and outlines the principal features of the Treaty, stressing the relationship of these features to international patent problems faced by United States companies.

While the author does not consider the proposed Treaty a cure-all for these problems, nor the draft to be perfect in all respects, he believes it is significant as a first step toward the achievement of lasting solutions.

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INTRODUCTION

ON MAY 31, 1967, THE UNITED INTERNATIONAL BUREAUX for the Protection of Intellectual Property (BIRPI) released to the public a draft Patent Cooperation Treaty. The Treaty was subsequently published in the June 13, 1967, issue of the *Official Gazette* of the U.S. Patent Office.

The purpose of this paper is to review the background underlying the proposed Treaty and to explain some of its important features.

THE PROBLEM

As has been stated so many times in recent years by prominent American businessmen, patent practitioners and officials of patent offices through the world,¹ the international patent system is inadequately equipped to serve today's needs. Added to an unprecedented explosion of patent applications of increased complexity being filed worldwide is the all but impossible burden of effectively managing these applications within the structure of more than 80 separate and widely divergent patent laws and procedures. The increasing number of duplicate and multiple patent applications for the same invention is a natural and proper consequence of the rapid acceleration of world trade, especially during the past decade.

Solutions must be found to minimize those difficulties for applicants and patent offices which are the consequence of the multiplicity of complex and divergent national patent procedures. Most commentators are frank to admit that there is no other escape and that the clear alternative is an utter collapse of the patent system or such serious alteration of its fundamental principles as to render it virtually impotent to serve its proper function as an impetus to innovation and as a stimulant to world trade.²

¹ Kurt Haertel, President the German Patent Office: "Crisis of National Patent Systems and Necessity of International Solutions." Conference on "World Patent Systems," conducted by the National Association of Manufacturers at New York City in June 1965.

Martin Kalikow, Patent Counsel IGE Export Division: Speech at The 175th Anniversary of the U. S. Patent System, October 20, 1965.

John R. Shipman, Director of International Patent Operations, IBM Corporation: "International Patent Planning," *Harvard Business Review* (March-April 1967).

² *EFTA Reporter* (European Free Trade Association), No. 165 (June 26, 1967): Excerpts from an interview given by E. Armitage, Assistant Comptroller in the British Patent Office and Chairman of the EFTA Working Party on Patents.

Typical of comments addressed to this problem is the recent statement of David Sarnoff, Chairman of the Board of RCA, at an Inter-Industry Conference on International Patents held in Frankfurt, Germany, on June 7, 1967. General Sarnoff said:

Nearly 350 years after the introduction of the first patent law, we are still burdened with a fragmented territorial concept of patent coverage. An inventor is still compelled to go through separate and often widely different procedures in nearly every nation where he seeks to establish title to his work.

A sharp rise in the volume of patent applications strains the facilities and manpower of individual patent offices. In member countries of the Paris Union, the number of applications grew by nearly 50 percent during the last ten years.

One year earlier, General Sarnoff, speaking at the Tenth Annual Public Conference of The Patent, Trademark, and Copyright Research Institute of The George Washington University, challenged his audience with the following statement:

One of today's principal challenges is to design an international patent structure that can accommodate the revolutionary changes in technology and spread its benefits more evenly around the world. Through the tremendous advances that have been made in one aspect of this technology—in communications—the physical means are available to accomplish this purpose. It is now technically feasible to establish a universal patent system, utilizing the latest communications devices and concepts, to bring swiftness, order, and reasonable uniformity to the entire patent structure.³

Surprisingly, the occasion for such statements of the problem and calls for remedial action have not been limited to the past few years. In fact, the same points have been made time and time again, each time with the same sense of urgency, at least for the past half-century. Indeed, as early as 1909, a French patent attorney named Reymond, in proposing an international patent convention to the very first meeting of AIPPI, the International Association for the Protection of Industrial Property, was frank to express a degree of frustration about the dilemma which has persisted down to this day. On that occasion, Reymond said:

While complaints are heard on all sides about the continually overburdening of the patent offices, serious men sit in the various offices and torment themselves in carrying out the same work.⁴

³ *IDEA*, Vol. 10, No. 1 (Spring 1966), p. 123.

⁴ C. P. Tootal, "Prospects of Further International Cooperation in the Field of Patents," *Transactions of the Chartered Institute of Patent Agents*, Vol. LXXIX (Session 1960-61), p. C92.

Little did he dream that almost 60 years later a world which is capable of sending a manned space vehicle to the moon would tolerate more than a quarter million duplicate or multiple patent filings. The point is rested here because much has been said and written about the problems—so much that more than one prominent patent attorney has been frankly critical of the many meetings, surveys and studies which have been devoted to the preparation of groundwork for action in this field. These people have been urging:

We already know what the problems are in international patents.
What we want to hear about are solutions!

THE OFFICE OF INTERNATIONAL PATENT AND TRADEMARK AFFAIRS

The Office of International Patent and Trademark Affairs (OIP-TA) was established in September 1964, largely as a result of initiative from Commissioner Edward J. Brenner and Assistant Secretary J. Herbert Hollomon, for the express purpose of developing positive programs for solving the problems which were apparent to everyone in both the private and public sectors of the patent system.⁵ At the time of the formation of this new office, a significant aspect of the situation was that most of the post-World War II initiative towards multilateral cooperation had been developed and sponsored by European patent people under the sponsorship of European institutions. Accordingly, a corollary purpose of OIPTA was to seek a leadership position for the United States in its search for practical solutions.

INTERNATIONAL PATENT PROGRAM AND OBJECTIVES

Initially, OIPTA launched a series of statistical studies, surveys and analyses of the situation in order to provide a basis for formulating a program and a strategy for achieving the desired objectives. The program which emerged consisted of several parts, the central direction of which was toward the ultimate goal of an international patent system.⁶

⁵ Address by the Commissioner of Patents, Edward J. Brenner, before the Indiana State Bar Association, Fort Wayne, Indiana, September 19, 1964.

⁶ "U. S. to Launch World Patent System Drive," *Journal of Commerce* (September 25, 1964).

Vincent Travaglini, "Exporters Have Important Stake in Protecting Their Industrial Property Rights Outside the U. S.," *Daily Commercial News and Shipping Guide* (Los Angeles, California).

"International Patent Situation Examined During 3-Day Conference," *International Commerce* (October 25, 1965).

The central core of the program consisted of a series of bilateral studies and exchanges with other patent offices which had also expressed considerable concern about the international patent problems and indicated their desire to enter into cooperative programs with the United States that would hopefully point the way toward solutions. As a consequence of this initiative, bilateral programs are now under way with the patent offices of a large number of countries, including West Germany, Switzerland, Sweden, France, Japan, Philippines, Czechoslovakia and Austria.

The principal purpose of these programs was to develop a data base for further cooperation.

UNITED STATES—WEST GERMANY SEARCH EXCHANGE

For example, the first program launched was an experimental exchange of search results on 2,000 patent applications on each of which a later corresponding case had been filed either in the United States (1,000 cases) or in West Germany (1,000 cases).⁷

Although the results of this experimental exchange are not conclusive, the exchange was both beneficial and encouraging from several standpoints.⁸

First, in a substantial number of cases, Examiners in both countries received material assistance from the search results of the other office both from the standpoint of improving the quality of their examinations and as a means of saving time.

Second, the exchange served to isolate those differences between the United States and German practice which would affect the usefulness of search results in the receiving office. Several follow-up studies on the cases involved in the exchange promise to produce still further insight into these differences.

Third, and perhaps most important of all, the exchange provided a unique opportunity for Examiners in the patent offices of each country to share, in the context of active cases, the experience of qualified

⁷ Harvey Winter, Business Practices Division, U. S. State Department, in his address entitled "USG International Patent Policy," before the International Patent and Trademark Association in Washington, D. C. January 25, 1966, stated:

The long range goal of the United States in the international patent field is the development of an international system under which a single patent would be effective in many countries. And we do not believe this is a utopian goal.

⁸ Joint Report on U. S.-German Search Exchange 838 O. G. 1225 (May 23, 1967).

Examiners in the other country while examining the same disclosures.

Although the above-listed benefits were limited to the small number of cases involved, the patent offices of the United States and West Germany have concluded that the exchange produced sufficient benefits to warrant proceeding with a continuing search exchange on all cases filed in both countries.⁹ This continuing exchange, which eliminates the elaborate record keeping of the experiment, is now in effect for some cases and will be fully implemented within the next few months.

OTHER BILATERAL PROGRAMS

Other bilateral exchange and study programs are intended to provide the Patent Office with further insight into the differences in patent examination practices, while at the same time, hopefully will provide savings of time and increased quality of examination. The Swiss exchange, for example, is providing a unique opportunity to evaluate the quality of searches performed by the International Patent Institute at The Hague (IIB). This international searching organization does all of the searching for the Swiss in the fields of horology and textile treatment, the only fields in which the Swiss patent office performs an examination. The IIB also supplies search reports on a contract basis for other member countries.¹⁰

The United States–Philippine program, details of which are soon to be announced to the public, involves the exchange of examination results rather than merely search reports and includes a procedure, optional to applicants, under which we will be able to test whether savings in the burden of duplicate prosecution will be possible for U.S. applicants as well as for the Philippine patent office.

A bilateral program with the French patent office, including an

⁹ Address by Commissioner of Patents, Edward J. Brenner, before the Patent, Trademark, and Copyright Section of the American Bar Association, August 5, 1967.

¹⁰ The International Patent Institute is a nonprofit organization established as a result of a diplomatic agreement signed at The Hague in 1947 on behalf of the governments of Belgium, France, Luxembourg and the Netherlands, to which agreement the governments of Monaco, Morocco, Switzerland, Turkey and the United Kingdom have also subscribed. The official name of the Institute is "Institut International des Brevets." The Institute's function is to carry out documentary research novelty reports and others of a technical nature for the benefit of the governments of the member countries and also on behalf of industrial undertakings, inventors and others who require technical information for the protection of industrial property interests.

exchange of search results quite similar to the Swiss program is soon to be initiated. This exchange concerns only one field of technology, pharmaceuticals, which is the only field in which the French presently conduct an examination. However, its importance may be much greater in the future, since France has recently introduced legislation which would eventually expand examination to all fields, using the IIB as its searching facility.¹¹

Parallel to the bilateral exchange and study programs has been involvement of the U.S. Patent Office in international efforts toward harmonization of patent laws and procedures and improved documentation and information retrieval techniques.

HARMONIZATION AND DOCUMENTATION

The Paris Convention has over the years been strengthened from the standpoint of bringing the nations of the world closer together in regard to some fundamental aspects of patent law. There have also been harmonization efforts on a regional basis, the best known of which are the three conventions of the Council of Europe on patent application formalities, points of substantive law and patent classification.¹² The Nordic countries have virtually accomplished a complete conformity of patent laws after a concerted effort of an intergovernmental committee which has been working toward this goal over the past 15 years.¹³

In documentation, the United States was a leader in establishing ICIREPAT, an informal intergovernmental organization of examining patent offices which has been engaged for a number of years in coordinating the development by member countries of mechanized search systems for shared use by other members.¹⁴ Similarly, the last

¹¹ The French National Assembly in the session ending July 1, 1967 adopted the proposed Bill, No. 244, introduced May 23, 1967 on the reform of the French Patent Law. Action by the Senate is expected in the course of the next fall session.

¹² Council of Europe—Convention on the Unification of Certain Points of Substantive Law on Patents for Invention (1963); European Convention on the International Classification of Patents for Invention (1954); European Convention Relating to the Formalities Required for Patent Application (1953). The background of these conventions is summarized in the Report of the Secretary General of the United Nations entitled "The Role of Patents in the Transfer of Technology to Developing Countries," Document E/3861/Rev.1, (1964).

¹³ S. Lewin, Chief of Division, Swedish Patent Office: "The Proposal for Unification of the Patent System in Scandinavia," *JPOS* (June 1965).

¹⁴ Proceedings of International Patent Office Workshop for Information Retrieval.

few years have seen a considerable increase in the amount of collaboration in the field of patent classification. Cooperation is now contemplated in the equally important development of microform reproduction systems for patent documents.¹⁵

BACKGROUND OF MULTILATERAL APPROACH

Until the spring of 1966, this three-phase program of the International Office constituted the principal thrust toward achieving some relief to the pressing international patent problems. However, at about that time, considerable evidence began to emerge that the program and strategy was inadequate to produce practical benefits soon enough to relieve the near impossible burden on applicants or to provide significant assistance to examining patent offices.

First was a realization based on experience that bilateral programs could only be developed beneficially to a certain point. The difficulty with bilateral programs, it was found, was not only the slowness of their progress but the fact that increasing the scope of cooperation in these programs and the corresponding benefits to be derived from them required changes in practices and law on a bilateral basis. While such changes might improve the results as between the two involved countries, these changes might not be at all consistent with the situation called for with a third country, and so forth. Accordingly, it was recognized that the program should be expanded to include a multilateral phase.

Confirming this conclusion were the results of an international survey conducted by the Office of International Patent and Trademark Affairs during the fall of 1965, the returns of which were received and tabulated in the spring of the following year. The forum for this survey consisted of approximately 235 companies which had been assigned more than 200 U.S. patent applications between the years 1942 and 1962. Replies to the survey questionnaire were received from 140, or approximately 60 percent, of the companies in this category. These replies, by-and-large, reflected the viewpoints of patent counsel

al, Part II of Proceedings of The 175th Anniversary of the U. S. Patent System.

Proceedings of the 2nd, 3rd, 4th, and 5th Annual Meetings of ICIREPAT (Committee for International Cooperation in Information Retrieval Among Examining Patent Offices).

Proceedings of the Executive Sessions of the 2nd, 3rd, 4th, 5th, and 6th Annual Meetings of ICIREPAT. ICIREPAT *Bulletins* Nos. 1-17.

¹⁵ Address by the Commissioner of Patents, Edward J. Brenner, delivered at the Annual Meeting of the Industrial Research Institute, Inc., May 31, 1967.

for these companies which represented a meaningful sampling of the view of patent professionals on the international problems which existed in the patent field and the solutions which seemed to them to be called for. In addition, the survey provided valuable statistical information on the extent of foreign filings, particularly as to the magnitude of duplication involved in these filings. Two of the questions in this survey were open-end requests for the opinions of respondents on the problems encountered in international patent practice and solutions which they deemed most practical to consider.

The survey also indicated an interest in more advanced steps, especially in the areas of simplification of filing procedures for international patent protection, the harmonization of formal requirements and the elimination of duplicate searching, examination, and prosecution of patent applications filed in more than one country. These points will be covered in more detail later in this paper, but the survey is mentioned here as part of the evidence which stimulated the Patent Office toward expanding the outlines of our program to include a broader, multilateral approach.

The Patent Office participated in a number of meetings, seminars and individual discussions with patent practitioners in the United States which served to reinforce the notion that more dramatic and far-reaching action would be required. Indeed, the whole tenor of attitudes expressed at meetings sponsored by the National Association of Manufacturers, The Patent, Trademark and Copyright Research Institute, and the Commemorative Committee for The 175th Anniversary of the U.S. Patent System was that the Patent Office should do more toward expanding the scope and extent of its international programs.

Another indicator came from other countries, principally in Europe. Reports from these countries revealed a sense of urgency about the need for international cooperation as constituting the last hope to preserve sound and effective patent systems. Efforts by the European Common Market countries to develop a European patent were bogged down because of various political considerations.¹⁶ Implementation of the Nordic patent system was delayed. European officials expressed to Commissioner Brenner and other officials of the Patent Office a strong desire to support cooperation on a broader basis with the United States and other non-European countries included as working partners.

¹⁶ See Statement by Jean Monnet "Scope of Patent Protection Within the Common Market" in "Creative Ferment in World Patent Systems." National Association of Manufacturers, June 1965.

All of these indications culminated in a proposal by the Departments of Commerce and State to initiate action on a multilateral basis under the sponsorship of BIRPI¹⁷ which had long been the focal point for worldwide collaboration in the patent field.

Before taking this step, a plan to present a resolution to the Executive Committee of the Paris Convention was explained to a representative group of interested patent practitioners in the United States. The group included inhouse patent counsels for companies having extensive international patent filings, representatives of leading international patent firms engaged in the filing of patent applications for large and small American companies, and members of prominent domestic patent law firms.

With this background, the United States presented a resolution to the Executive Committee of the Paris Union in Geneva, Switzerland, on September 29, 1966.¹⁸ This resolution took note of the substantial and growing volume of patent applications of increasing complexity, of the considerable duplication involved in these filings, and of the need to simplify the procedures for obtaining protection of inventions throughout the world. The resolution recommended that studies be undertaken on an urgent basis and that such studies include the consideration of concluding special agreements within the framework of the Paris Union.

The resolution was adopted by a unanimous vote. This was particularly significant because the membership of the Executive Committee which acted upon it was broadly representative of the world patent

¹⁷ BIRPI is the joint international Secretariat of the Paris and Berne Unions. It is one of the oldest international secretariats in the world. It started functioning more than 80 years ago and continued functioning without interruption through two world wars.

BIRPI stands for Bureaux Internationaux Réunis pour la Protection de la Propriété Intellectuelle. The expression "Intellectual Property" covers both industrial property and copyright. "Bureaux" means in this context Office or Secretariat. "Réunis" refers to the fact that it is a joint or united Secretariat for both the Paris and the Berne Unions.

Since 1960, BIRPI's headquarters have been in Geneva, Switzerland. Before that date they were in Berne, Switzerland.

Among other things, BIRPI carries out a program of legal technical assistance for developing countries, helping them to deal with their patent, trademark, and copyright problems. BIRPI's revenues (approximately \$1,000,000 per year) come from the contributions of member States, from the fees paid by applicants for the international registration of trademarks and from the sale of publications.

Two monthly periodicals in two languages—one dealing with industrial property, the other with copyright—report on the changes in the Unions and in the national legislations; they contain information on BIRPI's activities and articles on intellectual property questions.

¹⁸ *Industrial Property*, No. 10 (October 1966), p. 229.

community, including in addition to important European countries, the United States, Japan, and many other countries widely scattered geographically and diverse in their approach to industrial property protection. It seemed clear that the unanimous vote evidenced widespread interest in early and serious efforts to find solutions.

The decision to opt for a broader multilateral approach was announced publicly by Commissioner Brenner at a meeting sponsored by the National Association of Manufacturers in Washington on October 11, 1966. At this time, Commissioner Brenner said:

You will appreciate, from what I have already said, that we believe that a total systems approach is needed to solve the problems we face. One might easily argue that the foundations of harmonization ought to precede a multilateral exchange and acceptance agreement. However, it seems to us that such a limited approach is neither essential nor feasible at this stage of our dilemma. This does not mean we are going to blithely ignore the necessary foundation work. However, we believe it is necessary to begin prefabricating the structure of the system itself while the foundation is being laid.

Initially, the extent to which the results will be able to eliminate duplication and to expedite the obtaining of protection may be limited. In some cases the principal benefit will be to improve the quality of issued patents. However, as the foundation stones of harmonization are set into place, the prefabricated structure of the system will more quickly take shape and we will then be in striking distance of the eventual goal.

There is really nothing very unique about this kind of approach to development of a patent system. Indeed, our own system in its infancy 175 years ago was composed of a very simple, uncomplicated framework consisting merely of the formalities of filing and issue. The solid substance which has made it into one of the most effective patent systems in the world was added later and only then as a result of many years of dedicated work and gradual evolution of its fundamental principles and its administrative refinements. However, I don't believe any of us would suggest that it was not an historically significant achievement that it was boldly launched in spite of the fact that its founders must have appreciated its apparent deficiencies at the outset.

In response to this resolution, the officials of BIRPI moved promptly by organizing a series of consultations with experts from six states which had the largest number of patent applications, including a representative from the International Patent Institute at The Hague. The energy displayed by BIRPI in these steps was all the more impressive since BIRPI at the same time was heavily involved in preparations for the Stockholm Conference of 1967, which involved significant proposals in the field of international copyright protection as well as a move to strengthen the administrative structure for the various conventions for which it had secretariat responsibility. In spite

of this full schedule of other activities, BIRPI prepared a first draft which was distributed to selected consultants on January 1, 1967.¹⁰ Several drafts followed before the draft released on May 31, 1967, was published for broad scale consideration. During this period of time, the U.S. Patent Office followed the progress of BIRPI in this effort. The Office of International Patent and Trademark Affairs and the Department of State engaged in numerous informal discussions of the provisions of the preliminary drafts with various patent professionals.

A meeting of a six-country expert team was held in Geneva in February 1967, as a result of which the first draft was extensively revised. Prior to this meeting, the Departments of State and Commerce met with selected representatives of the same interests previously consulted and their views were taken into account in preparing for the February deliberations in Geneva. On March 30, 1967, the Deputy Director of BIRPI released a Progress Report on the Treaty at a Federal Bar Association Briefing Conference in Boston attended by more than 200 patent attorneys. The Departments of State and Commerce held a briefing session on the Treaty in April 1967, to which representatives of 50 United States companies were invited.

The preparation of the draft of the Treaty released on May 31 followed these meetings. BIRPI then scheduled a meeting of a Committee of Experts, October 2-10, 1967.

Attendance at this October meeting includes representatives of 23 Paris Union countries, seven intergovernmental organizations, and numerous private associations, including the International Association for the Protection of Industrial Property, the International Chamber of Commerce, and the National Association of Manufacturers.

OUTLINE OF DRAFT PCT TREATY

The proposed Treaty is a highly integrated proposal which, nevertheless, for purposes of analysis, may be divided into two phases.

Phase I is called "Central Filing Plus Search Report." This phase would be obligatory for all Contracting States and for all applicants wishing to file internationally.

Phase II is a more advanced stage which involves the establishment

¹⁰ "BIRPI Plan for Facilitating the Filing and Examination of Applications for the Protection of the Same Invention in a Number of Countries," Copy of BIRPI document PCT/INF/1, dated February 28, 1967. *Industrial Property*, No. 3 (March 1967).

of what is called a "Certificate of Patentability." Cooperation in this second phase would be optional for the Contracting States and each applicant would decide for himself whether he wanted to take advantage of this advanced phase.

It is important to note that the drafters did not contemplate in either phase a universal patent which would have extraterritorial effect in the member countries. Although the President's Commission on the Patent System recommended this as an eventual goal,²⁰ the present proposal does not go that far. National patenting remains the function of each country.

Under Phase I, the applicant files a single international application with the International Bureau. This filing may be made directly to that Bureau, or, more likely, through the intermediary of the applicant's national office. For United States' applicants it would likely be filed in the U.S. Patent Office. The applicant designates the countries in which he desires protection. This initial designation is tentative, required to be made final with payment of a small designation fee only after the search results have been seen and an opportunity to amend the claims given. The application is filed in English (one of several selected official languages—French, English, German and perhaps others). In addition, the international application is drafted according to a standard format which would be acceptable to all member countries.

If found acceptable as to form by the International Bureau, the international application is searched by a qualified searching authority, which then sends out a search report to the applicant as well as to the International Bureau. It is anticipated that the technical operations of the International Bureau will be handled by such searching authorities functioning under contract with the central Secretariat. These searching authorities would probably include three or four of the principal national patent offices which are willing and able to undertake these responsibilities, as well as the International Patent Institute at The Hague.

Upon transmittal of the search report to the applicant, he is then allowed to amend his claims. Thereafter, the application together with the search report is sent to the Contracting States designated by the applicant.

During this first phase of the Treaty, the application and search reports are to be published in an International Gazette within 18 to 24

²⁰ *Report of the President's Commission on the Patent System*, (Washington, D.C.: G.P.O., November 17, 1966).

months from the effective filing date of the application. In most cases, this publication will not take place until the applicant has had an opportunity to review and consider the search report and to amend the claims or withdraw his application.

If the country receiving the application and search report is a registration country, such as France, the application is likely to be published in that country as a French patent. France could refuse this effect, if for example, the application covered subject matter not considered to be patentable subject matter in France. Perhaps a better example is Italy, another registration country which does not today consider pharmaceutical patents to be proper subject matter.²¹ However, if the country receiving the application plus the search report is an examining country, such as Germany, the application may be subjected to examination by that country, which would be the sole judge to decide whether the international application complied with its national law. The German system includes a provision for opposition by third parties based on the knowledge of prior art which has not been found in the course of the examination. Such procedures would continue to be applicable to the international case.

In other words, the effect of an international application in each Contracting State is that of a regular national application.

To summarize the first phase:

- (1) A *single* application is filed in one of several selected languages;
- (2) After a formal check this application is then submitted to a single worldwide *search*;
- (3) Upon modification of the claims by the applicant, the application and the search are then *communicated to the* designated Contracting States;
- (4) And, shortly thereafter, worldwide publication of this document occurs within 18 to 24 months from the effective filing date.

Under Phase II, the applicant may, at any time before the expiration of the time limit allowed for amending claims, request a full examination and obtain an international Certificate of Patentability. This Certificate is issued, or denied, after an examination carried out

²¹ Another example can be found in the United States in the Atomic Energy Act of 1964, 42 US 2181, which states "No patent shall hereafter be granted for any invention or discovery which is useful solely in the utilization of special nuclear material or atomic energy in an atomic weapon."

by a qualified examining office. Here again the operations of the International Bureau would be carried out by three or four principal patent offices and the International Patent Institute at The Hague. The conditions which each invention has to meet in order to be entitled to an international certificate include worldwide novelty, non-obviousness, and utility or industrial applicability. In the case of a denial, the applicant can be heard by an international review board comprising highly qualified Examiners. If issued, the international certificate is communicated to the States designated by the applicant and would provide the basis for issuance of national patents provided requirements of national law are satisfied.

The international certificate is then communicated to the designated countries and published in the International Gazette. In the receiving countries, the Certificate would furnish a basis for issuing national patents. The Treaty does not, even in this second phase, preempt the authority of national offices. Thus, in some countries today, there are provisions for the citation of prior art by third parties which might take over at this stage.

INTERNATIONAL PATENT SURVEY

The key features of the Treaty are directly responsive to a number of the international patent problems as they were expressed in the survey referred to above. These features of the treaty will be outlined in the context of the survey responses.

DIVERSITY OF FORMAL REQUIREMENTS

There is today virtually no consistency or agreement among the various countries on the formal requirements of a patent application. The diversity extends to such routine matters as the size of paper which must be used or the size and type of drawings which must be included.

A recurring complaint of the respondents to this survey was that this unnecessary diversity all but precluded the possibility of using a single format for international filing. Not only does this increase costs of preparation, it leads, in many instances, to bickering with foreign patent officials on purely formal matters having little or no relationship to the value or substance of the invention.

The Treaty seeks to respond to this concern by providing as an

alternative to the many national filings that are now required a single international application format. So long as the international application conforms to the standard format it must be accepted by the member countries. Of course, if it fails to comply with the standard format, the application may be rejected, this rejection being subject to review either by an international bureau or, in certain cases, by recourse to the national patent office involved. In any event, the remedy is broader than it exists today under national filing requirements.

TIME FOR COMMITTING RESOURCES

To obtain the benefits of the Paris Convention with respect to priority, an applicant today must file all of his foreign patent applications within one year of his national filing. Because of the time involved in obtaining translations and in preparing the foreign applications, decisions as to filing abroad must usually be made before the commercial or scientific worth of the invention is determined.

The largest number of comments addressed to a single problem area were concerned with this difficulty. Companies stated that because of the timing they were either required to file on applications which later turned out to be of little value or, alternatively, neglected on those applications which proved important.

Several aspects of the Treaty are pertinent to this problem. By providing a single international filing under which the applicant may tentatively elect the countries in which he is interested, applicant may defer committing his resources until he has obtained an indication of the patentability of the invention which will occur, in most cases, outside the 12-month Convention period. Thus, it may be anticipated that applicants filing internationally under the Treaty will elect all or substantially all of the participating countries since there is no additional cost for such an election.

The Treaty offers two alternatives to enter the international filing system: By first filing an international application, either directly with the International Bureau or through the intermediary of his own national patent office; or, by first filing a national patent application in a country which is a member of the Paris Union followed by the international application which will benefit by the priority of the first filed national case, provided it is filed within the priority year.

In the context of the Paris Convention, a distinction must be made between the date of filing and the date of receipt of the international

application by the International Bureau. In every case, where the international application is a second application claiming priority benefits it must be filed, just as at present, within the priority year else the applicant will lose his priority. Thus, in such a case, if the international filing is made directly at the International Bureau it must be filed there prior to the expiration of one year from the date of the first filing.

If, on the other hand, it is made through the intermediary of a national office then the application must be filed in such national office prior to the end of the one-year priority term. The mere fact that, in this latter case, the national office is given a reasonable time for forwarding the second application to the International Bureau does not mean that the Paris Convention deadline has been extended.

While not altering the Convention priority term, the draft Treaty does offer a substantial advantage, equivalent to one of the principal purposes of the priority term, in deferring the time when the heaviest cost obligations of foreign filing must be committed. Chief among these is the expense of translations into the national language of each country in which protection is desired. Under present practice, this cost must be obligated by about the ninth month in order to assure that national filings are made prior to expiration of the twelfth month. Under the Treaty, applicants filing in one of the official languages can defer this expense until after the international application is communicated. This could be up to 24 months under Phase I and even longer if a Certificate of Patentability is requested under Phase II.

THE LANGUAGE BARRIER

A recurring and underlying problem frequently mentioned in the survey according to many respondents rests in the basic realm of communication of ideas. The most important aspect is the language barrier which increases expense and lowers effectiveness both in dealing with foreign patent offices and with attorneys and agents located in foreign countries. This frequently leads to a misunderstanding of the invention by the foreign patent office. Moreover, this misunderstanding frequently cannot be conveyed through the intermediary of double translations required when U.S. concerns attempt to respond to the foreign patent office objections and rejections. By providing for the basic filing, search, examination and prosecution of the application in English, the language problems now encountered are minimized.

Moreover, in the prosecution of an application, a U.S. applicant may deal with his U.S. attorney who is most familiar with his case. In most cases for U.S. applicants, this will result in completion of the examination in foreign countries sooner than is now possible.

MULTIPLE SEARCHES

A problem frequently mentioned in the survey resulted from the fact that each searching office now conducts its own search of the invention as though a search on the same application was not being carried out in another office. This results in evaluating the invention against different prior art and involves a substantial amount of duplication both for the applicant and for the search offices. In turn, this latter duplication creates backlogs which delay the issuance of patents.

The Treaty in part alleviates this problem by providing for a single international search to be conducted by qualified searching facilities. While the search files of these facilities will—at least in the initial steps of the Treaty—not be identical and while additional national searching may still be required, the Treaty moves in a direction of the goal of a single highly qualified search using an international search file. Moreover, the Treaty draws upon the existing facilities both of national patent offices and the International Patent Institute, which is more realistic at this point in history than to attempt to create a single international organization capable of handling the expected workload.

CONCLUSION

Certainly one of the benefits of the Treaty is to simplify international filing of patent applications and these simplified procedures will naturally lead to an increased interest in broader protection.

The U.S. patent system has been designed to encourage the patenting of new inventions. Indeed, substantially the entire patent profession strongly urged this point in connection with the patent fee legislation which resulted in increased fees in the United States a few years ago. The point was made at that time that an effective patent system should encourage the filing of patent applications. No one has ever suggested that we should make it more difficult for foreign inventors to file and obtain patent protection in the United States.

Looking at this question from an overall viewpoint, it is clear that the Treaty is not designed to reduce the number of inventions for which patent protection is requested. The aim of the Treaty is to eliminate the duplication of effort found in the multiple processing and examination of these inventions. The number of inventions for which applications are filed in a single country (usually the home country of the inventor) is not increasing to any marked extent. Rather it is the multiple filing of the same invention that has created the international problem. It is the view of most people that the patent system of the world should and must be capable of dealing with increased inventive activity.

Clearly, the draft Patent Cooperation Treaty does not purport to be a cure-all for all problems. Nor is it considered to be a perfect draft in many respects. Indeed, it may be expected there will be numerous drafts and considerable discussion before the time is reached to decide whether to participate in formal treaty negotiations.

The BIRPI Treaty effort has recently been characterized by one European patent official as the last chance for effective worldwide cooperation. At the Conference on International Patents, sponsored by the National Association of Manufacturers in Frankfurt, Germany, on June 8, 1967, Gordon Grant, Comptroller of the Patent Office of the United Kingdom, said: ". . . This is the eleventh hour of the examining patent system."

As far as the proposed Patent Cooperation Treaty is concerned, Mr. Grant went on to say that he believed this Treaty is "at any rate, for the time being, the last chance we have for a real international project."

The BIRPI Plan for a Patent Cooperation Treaty

STEPHEN P. LADAS*

SUMMARY

IN RESPONSE TO A SUGGESTION OF THE AMERICAN GOVERNMENT for the study of a plan to reduce the duplication of the examination problem of patent applications, BIRPI (United International Bureaux for the Protection of Intellectual Property) very promptly worked out a draft of a Treaty for international filing of applications with BIRPI, and this draft has been distributed and a Committee of Experts is being convened in Geneva to consider this draft.

This paper analyses the draft, evaluates it and offers a conclusion and a much simpler alternative to this plan, calculated to carry out the real objectives sought by the American proposal.

INTRODUCTION

AFTER DISTRIBUTION LAST MARCH of a four-page outline of a certain project, BIRPI has now published this plan as Document PCT/I/1, 2,

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3, 4 and 5, together with a call for a meeting of experts to discuss the plan in Geneva on October 2, 1967. This meeting consists of delegates of 23 countries of the Paris Union. Six nongovernmental organizations representing the private sector were also invited to give their advice.

The proposed draft Treaty was issued just as the summer vacation period began, and it was difficult for these private organizations to have the necessary consultations with their members so as to be really prepared to express their groups' views at the proposed meeting on October 2; government representatives of the principal countries, on the other hand, had been consulting and discussing the project for several months past.

The BIRPI documents consist of an Explanatory Memorandum, a draft Treaty with notes on each Article, Annexes and a Memorandum on Regulations.

It is proposed here first to give a general outline of the plan and then to attempt an evaluation.

The plan consists of two phases: The first deals with International Filing of Applications leading to a novelty search report and communication of this to the countries concerned. A country has an option to accept this part of the Treaty only. Then there is a second part providing for the issue by BIRPI of International Certificates of Patentability on the inventions so filed and searched. This a country may or may not accept. Each of these two parts of the Treaty will be considered separately hereinafter.

OUTLINE OF PART OF TREATY

DEALING WITH INTERNATIONAL FILING AND SEARCH REPORT

- (1) An international patent application may be filed by any person who is a national or who has his industrial or commercial establishment in one of the contracting countries. Only countries party to the Paris Union may become party of the proposed new Treaty.

The international application may be filed directly with BIRPI, but it may also be filed through the national patent office of the country if this facility is provided by law. On the other hand, if the law of a country requires filing through the national patent office, then the patent application must be filed through such office which will forward it to BIRPI.

- (2) The application must be in a form prescribed in the Regulations. Its filing date shall be the date on which BIRPI receives

it, and such filing date will generate the Convention priority. On the other hand, if a prior national application has been filed, then the international application will have the benefit of the right of priority, but the term of priority is extended by an extra month because while the national patent office must receive the international application within a year, BIRPI may receive it within a month thereafter.

- (3) The international application must indicate the contracting States to which the applicant desires it to be extended. A later designation of such States may only be made within a year from the filing of a national application, the priority of which is claimed, or a year after the filing of the international application, if no priority is claimed.
- (4) BIRPI will examine the international application with regard to form. In the case of some serious defects, BIRPI will reject the application, and there is no recourse from such rejection. In the case of formal defects only, the applicant is given an opportunity to rectify such defects within a prescribed term. On failure to do so, the international application is not further processed. The only recourse of the applicant in such case is to go to the national patent offices of the countries selected by him, and ask each to request BIRPI to send to them a copy of the international application, and if each such national patent office may consider the application regular, it will accept it so far as *it* is concerned. The application must be in one of the official languages: English, French, German or Russian.
- (5) Once BIRPI determines that the international application is in regular form, it will proceed to establish a search report in the language of the international application. The search will be prepared for BIRPI by a national patent office or by the International Patent Institute of The Hague under arrangements to be concluded by BIRPI. Such arrangements will be made only with patent offices of States that have adequate facilities (documentation and staff) for search and can handle the language of the international application.

For the purpose of the search, Annex I of the Treaty provides for absolute novelty with respect to prior publication or use anywhere. The relevant prior art shall be that which determines that the invention claimed is new or that it involves an inventive step. The minimum documentation specified is patents of Belgium, France, Germany, Japan, Soviet Union, Switz-

erland, United Kingdom, and the United States, published patent applications in their languages, and technical periodical publications designated from time to time by BIRPI.

The search report shall consist of references and a succinct summary analysis. If the searching authority finds the language unclear or mistakes in the international application, it invites the applicant to clarify. If the applicant fails to comply, the international application will not be further processed. If the searching authority finds lack of unity, the applicant will be invited to limit his claims. He may then file a divisional international application.

- (6) BIRPI will communicate the search report to the applicant and within a prescribed term he may amend his claims. He must also then submit to BIRPI translations (or pay the cost of translations to be made by BIRPI) into each of the official languages of an abstract of the invention and of the claims. Failure to submit the latter causes the international application to be considered withdrawn.
- (7) Then and then only, will BIRPI communicate a copy of the international application together with the search report to the patent offices of the countries selected by the applicant. It is estimated by BIRPI that the communication will take place promptly after the 24th month from the date of the first national filing, if priority is claimed.
- (8) After such communication, BIRPI will publish the international application and the search report, and in any case before the end of 24 months. "Publication" means making copies available to any person. The abstract of the invention and claims will also be published in the Gazette. However, on request of the applicant, publication may take place before the expiration of the indicated time.
- (9) On receipt of the communication of the international application with the search report from BIRPI, any national patent office may invite the applicant to submit a translation of the application in its own language. Failure to comply within two months causes the denial of the international application in the particular State.
- (10) Any international application communicated by BIRPI will have the effect of a regular national application for a patent in the State concerned, as of the date of filing of the international application, unless the national patent office of a State within a

year notifies the applicant and BIRPI that it denies such effect. Such denial may be made *solely* for the reason that the international application does not comply with the requirements of the Treaty and its Regulations. Thus, the original BIRPI's determination of "regularity" can be challenged by any national patent office. Denial is notified to the applicant and to BIRPI, and each separately may file replies to the national patent office.

- (11) Absent such denial of effect of an international application for irregularity, the national patent office of each country *shall* grant a national patent unless the subject matter of the invention is generally excluded by its law (for instance, pharmaceutical products, immoral inventions, et cetera), or unless the applicant has not complied with any obligation imposed by national law for designation of an agent or of an Address for Service. If no such objections exist, and a State fails to issue a patent, then the international application shall in that State be deemed to be a national patent.
- (12) While the whole purpose of the Treaty is to ensure a single search valid for all countries selected by the applicant in the international application, nevertheless it is provided that any contracting State, whose national law provides for novelty examination in all or in certain fields of technology, may declare to BIRPI that it will not grant a patent on the international application with a search report without the State making its own search in addition.

OUTLINE OF PART OF TREATY CONCERNING CERTIFICATES OF PATENTABILITY

Chapter II of the proposed Treaty deals with the issue by BIRPI of International Certificates of Patentability. A country adhering to the Treaty may declare that it will not apply the provisions of this Chapter. The main features of this part of the Treaty are:

- (1) An applicant may request BIRPI to issue an International Certificate of Patentability. This request must be made up to the time that the applicant amends his claims after receipt of the search report, and before communication of the international application by BIRPI to the countries selected by the applicant. At that time, the applicant selects the countries in

which he wishes to use the Certificate of Patentability and conceivably he may drop some of the countries in which he originally wanted to file.

- (2) Upon receipt of this request, BIRPI will ask a national patent office or the International Patent Institute of The Hague to examine the international application with a view to issue of a Certificate of Patentability for BIRPI. This Certificate will certify that the invention is new, that it involves an inventive step, and that it is capable of industrial application. These three requirements are defined generally in Annex II to the Treaty. It is proposed that the applicant be given adequate opportunity for direct communication with the examining authority, and he may make amendments to his international application to meet the requirements of such examining authority.
- (3) The following possibilities may then arise:
 - (a) The examining authority is satisfied that all requirements for a Certificate exist, and it shall draw up the Certificate of Patentability and send it to the Bureau.
 - (b) The examining authority may not be satisfied and shall indicate to the Bureau that no such Certificate will issue for stated reasons. The Bureau will notify the applicant that it intends to deny a Certificate of Patentability.
 - (c) The applicant may file counter arguments and request examination by a Review Board of BIRPI. This Board may agree with the examining authority or may disagree and itself draw up the Certificate of Patentability.
 - (d) The applicant does not file a reply or withdraws his request for a Certificate of Patentability, and this is then formally denied.
- (4) The Certificate of Patentability issued by the Bureau on the basis of one drawn up by the examining authority or the Review Board, in the language of the international application, will be communicated to the patent offices of the selected countries, and it will be published by BIRPI. Any national patent office may invite the applicant to submit a translation of the Certificate in its own language. Likewise, the Bureau will notify the patent offices of the selected countries of the denial of the Certificate of Patentability, or of the withdrawal by the applicant of the request for such Certificate.
- (5) The national patent office of each selected State to which a

Certificate of Patentability has been communicated shall, on the basis of such Certificate, grant a national patent provided, however, that it may deny such grant of patent for any of the following reasons, if applicable under national law:

- (a) The invention relates to a subject matter not patentable generally under its law;
- (b) The invention does not satisfy the requirements of novelty, inventive step and industrial application, as defined in Annex II;
- (c) The invention includes matter contained in any prior national patent application filed or patent granted and published in such State;
- (d) There has been usurpation of the invention;
- (e) The applicant has not complied with any obligation to be represented by an agent or to designate an Address for Service for the purpose of the procedure before such patent office.

Recourse may be had as provided by national law against any such denial.

- (6) The national patent office must notify the applicant and BIRPI of its intent to deny a patent, with a statement of reasons. This notification must be made by the national patent office within a year from the date the Certificate of Patentability has reached it, except when opposition is available in such country. Otherwise, the International Certificate of Patentability shall be deemed to be a national patent in that State.

EVALUATION OF DRAFT TREATY WITH RESPECT TO INTERNATIONAL PATENT FILING AND SEARCH REPORTS

BIRPI's Explanatory Memorandum to the draft Treaty indicates that it seeks to accomplish three objectives in international patent cooperation:

- (1) The owner of an invention desirous of obtaining international protection may file, for a group of countries he selects, a single international patent application in one of the official languages with an initial small filing fee for each country.
- (2) A single search report is to be obtained by BIRPI to support the international application in the whole group of countries concerned, thus replacing multiple searches in many countries.

- (3) It seeks to relieve substantial administrative difficulties now experienced by examining national patent offices through a suggested division of labor, to reduce backlog and delays in handling patent applications.

These, indeed, may appear to be very valuable advantages, but one may be permitted to remark as a matter of general comment that:

- (1) A single international application is not the only way of solving present difficulties. These could be overcome within the framework of national filing.
- (2) A single search is indeed a valuable ultimate objective. But this should be a central search and not one made by one of a group of selected agencies including various national patent offices and the International Patent Institute. A search must be pinpointed to be effective. A diffuse search is worse than useless since irrelevant matter would be cited and must be studied when determining patentability. For strict countries, searching is really in two parts—art showing the “state of art,” and art affecting novelty. Five to 10 percent of all applications are affected by prior unpublished copending applications. At present, these can only be found by national searching in each patent office. Since pending applications are secret, they are not to be taken into account under the definition of prior art in Annex I to the draft. Computerization is the only hope, but this presents enormous difficulties and is not around the corner. When this comes, it might be possible to feed pending applications into data storage for searching under secrecy provisions. When a relevant prior copending application is cited by number, the examination of the later application must be held up until the earlier application is abandoned, published or granted. Such delay is inherent, whatever the system.
- (3) Apart from searching, the difficulties of national patent offices will be cured only by national, not international, efforts.

But even apart from these general remarks, the question is whether the BIRPI project will accomplish the indicated results.

The following comments may be noted in this respect:

- (1) The whole thrust of the project does not spell out alleviation of the novelty search problem for certain patent offices, such as the U. S. Patent Office. Indeed:
 - (a) A country may require its own applicants to forward international patent applications through the national patent office, and may also require that the search be made

by its own national patent office (Art. 2 [1] [2], and Art. 9 [4]).

- (b) Since English will be an official language, and since the U.S. Patent Office novelty search is particularly good, it is most likely that BIRPI will send international applications for search to the U. S. Patent Office from such countries as:
 - (i) English-speaking countries, such as Australia, South Africa, Canada, India, et cetera;
 - (ii) those countries in which the applicants would prefer to write their international application in English as the official language, such as Japan, Scandinavian countries, Italy, and others.
- (2) BIRPI makes it clear in its introduction to the project that international applications for patents shall include also Certificates of Inventorship. With the easy filing, a very large proportion of the more than 100,000 Russian applications may be thrown into the hamper. Since Russian is an official language, these will be searched by the Soviet Patent Office, and its own search report will be sent to the other countries. These, and particularly the United States, in self-defense against this mass, will have to insist on retaining under Article 17 (3) the right to apply their own novelty examination. Hence, a tremendous number of Russian Certificates of Inventorship may have to be searched by the U. S. Patent Office.
- (3) BIRPI also says in its introduction that under the proposed scheme, it is expected that more inventions will be introduced in more countries, thereby spreading technical knowledge and encouraging investment.

Theoretically, this sounds fine, but let us analyze this statement realistically. Inventors and patentees have heretofore filed foreign applications selectively—in the countries in which they really require protection and where it is worthwhile for them to obtain and *maintain* patents. Selection is made on the basis of the nature of the invention. There is no interest in getting a patent in a country where the invention could not be practiced. Defensive protection is obtained in countries where the invention could be made by a competitor and exported to a country where no patent has been obtained. Only in the case of inventions which can be practiced in most countries by reason of the smallness of the investment required, or where importation could be made from a country that does not grant patents

in the particular field (for instance, pharmaceutical patents in Italy), only then patents are being obtained on a wider territory basis.

Americans may, at first sight, like the idea of obtaining easily patents in a large number of countries, whether they are really needed or not, if they are cheap. But they have to think of compulsory licenses in all countries and also the cost of maintaining such patents by payment of annuities.

But there is also the other side of the coin. Foreigners also will have that advantage. Looking at the 1965 statistics, published by BIRPI, there were 2263 applications filed in the United States by Japanese, and 215 applications by Russians. What would happen, under the new system, with the 60,796 Japanese-owned patents and 106,435 petty patents (filed in 1965), and with 102,365 Certificates of Inventorship in the USSR? Will they not find it easy to extend a large number of these to the United States under the new project? Certainly, the Soviet State which owns all of these 100,000 Certificates of Inventorship and which does not mind the cost and does not have to worry about compulsory licenses and annuities in the United States may conceivably extend, under the new project, a very large number of these to the United States—a country in which there is industry available for any kind of invention. What will this do to the United States industry, and what will this do to the U. S. Patent Office?

Is it not also possible that there will then be an insistent urge in the United States for the introduction of compulsory license or even for revocation for nonworking and payment of annuities for patents in order to deal with such Soviet-owned patents? Under the principle of the Paris Convention against discrimination of foreigners, such compulsory licenses and payment of annuities will become applicable to American patent owners as well as to foreigners.

Then BIRPI seeks to attract developing countries to its project by telling them that through this scheme they will be called upon to grant patents having a presumption of novelty and validity, since they have no facilities for searching and examining applications filed in their countries. Nonexamination has

not prevented France from maintaining its patent system for a century. Moreover, is it to the interest of developing countries to tie up their hands with patents for inventions which will never be used industrially in their territory? They are being lured with the idea that this will encourage investment in their countries, but there can be no investment unless the patentee has an interest to practice his invention or to find a licensee there. The greatest hope of developing countries is to grant confirmation patents for inventions which they really need and which the foreign patentees will want to use.

With regard to spreading of technical knowledge, this does not depend upon obtaining local patents. Published patents and technical journals supply this information as well.

Moreover, the present outcry in Europe on the gap-of-technology problem would be increased by any scheme which purports to make it possible for Americans to obtain more patents for more inventions in more countries.

- (4) Further, the idea of an international patent filing with effects in each country as of the date of filing and the definition of such effects in Article 16 of the draft Treaty excludes the concept of invention date and rests on the first-to-file principle. Yet this principle is vigorously opposed at this time in the United States in connection with the proposed Patent Reform Act of 1967.
- (5) The Treaty contemplates the establishment of BIRPI as a super-patent office, requiring a large technical and clerical staff and with important powers in the administration of the project. These powers are particularly the following:
 - (a) The Bureau will enjoy an extra month of priority term (Art. 3 [1]). This discriminates against countries of the Paris Convention which will not adhere to the proposed new Treaty.
 - (b) The Bureau may extend the priority term for *vis major* (Art. 3 [2]). This is not provided for in Article 4 of the Paris Convention and constitutes another discrimination.
 - (c) It passes on compliance of the international application with requirements of form and may refuse to process the application (Art. 7 [1] and [2]). This, of course, may cause the loss of the priority right. The only recourse of the applicant in such case is to file a request with every patent office in the selected countries asking such office to

request a copy of the international application, and such office may then declare that it recognizes the application as being a regular international application so far as *it* is concerned. To obtain this result for every one of the selected countries, he will have to file a request with every national patent office, and unless such patent offices act favorably to the applicant, the priority right may be lost.

(6) Notwithstanding this interposition of BIRPI or because of this (a natural result of ensuing complications), new difficulties and problems arise:

- (a) Since the international application will be communicated to the selected countries after the search report is in, and after the applicant has made changes in view of the search report, et cetera, in effect the selected countries will receive Convention applications 24 months after the filing date. This means that national offices will have to wait for 24 months before examining national applications (Art. 13).
- (b) Applications with search reports will be published 18 to 24 months after the filing date, but the applicant may request earlier publication, thus preventing grant of another's application for the same invention in any of the contracting countries (Art. 14 [2] [c]).
- (c) National patent offices can ask for a translation in their own language, after receiving communication of an international application from BIRPI. If the applicant fails to file this within two months from the issue of invitation, the international application may be denied effect in that country (Art. 15 [3]).
- (d) If the applicant does not file within the prescribed term, after communication of the international application to the selected countries, a translation of an abstract of the invention and of the claims in the official languages, the international application will be deemed withdrawn. There is no recourse against this result (Art. 10 [3]).
- (e) National patent offices may deny to the international application the effect of a national application for the reason that the application does not comply with the Agreement and Regulations. Thus, national patent offices may examine the question of form, notwithstanding that

BIRPI already has approved the international application (Art. 16).

- (f) A national patent office not bound by Chapter II must grant a patent on the international application communicated to them and not found to be in noncompliance with the Agreement, unless the subject matter is not patentable (Art. 17).
- (g) A contracting State practicing novelty examination may declare that it is not bound to grant the patent on the basis of the search obtained by BIRPI, and this would mean that it can make its own novelty search (Art. 17 [3] [a]).

If examining patent offices make this declaration, then the search report obtained by BIRPI will not relieve such offices from having to make a search themselves. Indeed, bearing in mind the above, all strict countries will probably opt for re-examination into novelty. The nonexamination countries in any case do not need it for issuing patents.

All of the above means considerable correspondence between the applicant and BIRPI and national patent offices, compliance with many prescribed terms, and many dangers of forfeiture of the application or of the priority right.

EVALUATION OF PART OF TREATY

DEALING WITH INTERNATIONAL CERTIFICATES OF PATENTABILITY

While the request for an International Certificate of Patentability is a separate matter, and this is preceded by the communication of the international application with the search report, it would be possible, in the countries which accept this second part of the Treaty, for an applicant to request of BIRPI that the Certificate of Patentability be issued to him when he files the international application. In such a case, BIRPI, in sending a copy of the international application to the national patent offices for a search report, may also ask for the drawing up of a Certificate of Patentability. The language problem generally will compel this. Thus, in the case of an international application in English, when the search report will be requested from the U. S. Patent Office, BIRPI naturally will also ask such office for a Certificate of Patentability.

Of course, generally, a national patent office or the International

Patent Institute will have to prepare the search report much earlier in view of the time limits involved, and because the examination of patentability is a much more time-consuming task.

In any case, the important point is whether there would be any alleviation of the administrative problem of examination of inventions with respect to patentability as a result of a supposed division of labor. If it be assumed, as it must, that the scheme will favor the filing of more inventions in foreign countries, and taking into account the small number of countries which have the staff and facilities for examination, there is a serious question whether the situation would be eased up in those countries.

But the real problem is what would be the value of such a Certificate of Patentability in other countries after all of the labor and delays in its preparation.

There is, of course, a negative value to this scheme. If the national patent office to which BIRPI has applied for a Certificate of Patentability denies this and the applicant does not go before the Board of Review, or if the Board also denies, BIRPI will communicate such denial to all countries selected by the applicant. This result may be satisfactory for insignificant inventions, but may also be due to the severity or obfuscation of the particular national patent office selected by BIRPI, and this may kill the chances of the applicant in getting patents anywhere.

The grant of a Certificate of Patentability will lead to the issue of a national patent in the countries which practice no examination, but this is hardly an advantage to the scheme because these countries in any case grant patents upon the filing of a regular application.

It is the effect of the Certificate of Patentability in examining patent offices which is the critical problem. These countries necessarily will proceed with an examination of their own into patentability so long as their national laws have not been harmonized with regard to the criteria of patentability. These criteria are well known and their general definition in Annex II hardly advances the problem.

The criterion of novelty introduces the principle of absolute novelty with the respect to publication or use anywhere, and this has already been commented upon. With particular reference to the United States, it excludes any grace period or the concept of invention. It includes a six-months' grace period but only with respect to usurpation and exhibition at an international exposition.

This criterion of inventive step is defined as an invention which is not obvious, having regard to the prior art. This is not very helpful. It

is a mere definition, not a construction or interpretation.

The criterion of industrial application is defined as an invention useful or capable of being used in any kind of industry, including agriculture. This again is hardly helpful.

Finally, with regard to excluded subject matter, the definition excludes any invention the publication or exploitation of which would be contrary to public order or morality. The terms "public order" and "morality" do not have the same meaning in all countries.

It is the applicability of the criteria of novelty, inventive height and industrial application to the particular invention claimed which is the real difficulty. The determination by a patent office or by the Institute of The Hague is meaningless in the absence of complete agreement as regards standards. Indeed, so far it has been impossible to write a satisfactory definition into the law of a single country. In the United States, for instance, the Patent Office, the Court of Customs and Patent Appeals and the regular Federal Courts all have different ideas as to patentability. How, then, is it possible to write into the Treaty the meaning of the tests of patentability?

Furthermore, the Certificate of Patentability would presumably apply to the claims. But claim practice is variable in the different countries. Obviously, then, we must first have a greater uniformity and clarity in claim drafting and in practice concerning unity of invention before a Certificate of Patentability issued by BIRPI can command acceptance in examining countries.

It is not indicated, but presumably the scheme means that the countries selected by the applicant and in which copy of the international application with the search report has been communicated, will in the meantime defer examination into patentability until BIRPI has sent to them the International Certificate of Patentability or has advised them that such Certificate has been denied. Are local inventors who have filed national patent applications in their country to tolerate the holding up of their applications while the patent office is waiting for the Certificate of Patentability of international applications?

A CONCLUSION AND AN ALTERNATIVE

In conclusion, it is submitted that the whole plan proposed in the BIRPI Treaty is impractical, unwise and unacceptable. It hardly cures any of the problems which we are facing in the present crisis and it is likely to worsen the existing situation. It is most likely to increase the backlog of patent applications filed in foreign countries by eliminating

the selective basis on which foreign patent applications are filed today. It will increase the burdens and administrative difficulties of examining patent offices. In the long run, it will not save money for the applicants, and it will make the prosecution of applications by the indirectness of conducting such procedure through the International Bureau much more complex and dilatory.

It is undoubtedly true that there is dissatisfaction and impatience with the present workings of the patent system in many countries on the part of inventors and industry in the present era of technological expansion. We heard it said that they want "speedy and air-tight patents"—a self-contradiction, and yet an understandable objective. Industry wishes to reduce delay in the publication and grant of patents and is handicapped by the poor quality of patents with unclear disclosures and ambiguous claims. It seeks means of avoiding the economic nonsense of multiple searches for foreign patents and the consequent expense.

On the other hand, government officials are deeply concerned with the rising backlog of a steadily increasing number of patent applications, the mounting tide of technological "art" that must be searched, and the desire to eliminate at an early stage poor and indifferent inventions and purely defensive applications. For these reasons, they are genuinely desirous of advancing international cooperation which may cope with these difficulties and which will give satisfaction to the needs of industry.

They looked for a quick solution and BIRPI has produced this plan. But before you can put on a roof, you must build a foundation and erect the supporting walls. Work must be done, primarily through BIRPI: On a uniform patent application with adequacy of description, form of claims, title, abstract and unity of invention; on deferred examination and early publication; on central searching; on uniform standards of patentability.

No changes in detail of the draft Treaty can save this, and the meeting of experts on October 2, 1967, in Geneva should not address itself to the draft but rather to an exchange of views on plans and studies of BIRPI on basic or fundamental procedures and substantive problems.

While waiting for these basic procedures and substantive matters to be agreed upon, a considerable improvement may be sought by a single amendment of the Paris Convention at its proposed next Conference of Revision at Vienna in 1970. The amendment could be inserted in Article 4 of the Convention, or a new Article as an

extension of the stipulations of Article 4. This amendment might provide:

- (1) Applications filed in foreign countries within the Convention term would be merely certified copies of the first application filed in a Convention country, accompanied only with a translation into the local language of an abstract of the invention and of the claims, and with an initial modest filing fee.
- (2) Within an agreed term, after the expiration of the Convention priority period (say, six or 12 months), the applicant would be required to produce the novelty search report, or even the decision of acceptance of the application if issued, to the foreign patent office. If the applicant fails to file this within the agreed term, the foreign application will be deemed withdrawn unless the applicant proves, by an official communication of the first patent office, that the novelty search report has not yet been issued and in such case the foreign patent office would be free to undertake its own novelty examination. If the original application has been filed in a nonexamination country, the applicant would produce a search report of the International Patent Institute of The Hague.
- (3) At that time, the applicant will file a translation of the original application, if required by the foreign country, and a specification and claims drafted in accordance with the law of that country reflecting also any amendments of such claims resulting from the novelty search. While the foreign patent office would not be controlled by the search report in the home country or in the International Patent Institute, it would be considerably assisted by it.
- (4) At that time also, i.e., within 18 or 24 months from the original filing date, any country desiring publication of applications could arrange for this by a simple provision in its own law. Following such publication, what was in fact intended to be a defensive application need not be further prosecuted.*

This is in effect an arrangement for deferred international examination of Convention applications. It is a sufficiently short deferment of examination which even those who object to the system of deferred examination may accept. It has the advantage of the present selective system of foreign filings. It reduces original expense. It enables abandonment of foreign applications if the home examination discourages going forward.

* See Appendix.

The proposed arrangement eliminates the wholly unnecessary interposition of BIRPI with all of its delays, risks and costs. It relieves BIRPI, an organization essentially concerned with studies, planning and investigation, of a terrific load of administration, and makes it unnecessary to create a supranational patent office requiring a large administrative, clerical and technical staff to handle an enormous number of patent applications.

In addition, a major advantage of the proposed alternative is that each country could maintain in its law those features which have been found over the years to be consistent with the objectives of its own patent system.

BIRPI, which has done such a creditable and generally approved work in administering the Paris and other industrial property Conventions and in drafting Model Laws on Patents and Trademarks for developing countries, should continue this important work and, with the assistance of experts, engage in intensive and extensive study and planning in the fields of central search on a computerized basis and in uniform requirements of form for specifications and claims.

APPENDIX

DRAFT AMENDMENT TO THE PARIS CONVENTION PROPOSED BY STEPHEN P. LADAS

The contracting countries, animated by the desire to alleviate the workload of their patent offices and to reduce the unnecessary duplication of effort in the filing and obtaining of patents on the same invention in several countries, have determined to conclude the present special Arrangement, pursuant to the provisions of Article 15 of the Paris Convention for the Protection of Industrial Property, as last revised at Lisbon on October 31, 1958.

Article 1

The right of priority provided for in Article 4 of the Paris Convention, as revised at Lisbon on October 31, 1958, may be claimed and preserved in the other countries of the Union by a person who has duly filed an application for a patent in one of such countries upon compliance with the following requirements:

- (1) Files a certified copy of the first application including the filing number and filing date thereof in the language in which this has been filed, accompanied only with a translation into the language of the country of the subsequent application of a summary of the invention claimed, and a filing fee equivalent to \$ —;
- (2) Such first application of which a certified copy is filed is in a form complying with the formal requirements provided for in the Annex to this Arrangement;
- (3) Files within a term not exceeding nine months from the expiration of the period provided for in Paragraph C of Article 4 a novelty search report or a decision of acceptance of the first application;

- (4) Files within a further term of three months from the filing of the novelty search report, a translation of the first application in the language of the country of the subsequent application, if required by its law or regulations, and a description and claims drafted in accordance with the law of such country, reflecting also any amendments of such claims resulting from the novelty search report.

Article 2

In cases where no right of priority is claimed under Article 4 of the Paris Convention, an application for a patent filed in a country of the Union by a person entitled to the benefits of such Convention and of the present Arrangement shall be deemed properly filed on the date of filing in such country, if the applicant complies with the requirements of Article 1 (1), (2), (3) and (4), except that with respect to 1 (3), the term of nine months shall be computed from the filing date in such country.

Article 3

If the applicant fails to file the novelty search report within the term provided for in Article 1 (3) or Article 2, the subsequent application shall be deemed withdrawn, unless the applicant files in lieu of the novelty search report a certificate by the Administration of the country in which the first application has been filed that no novelty search has been issued as yet, and a statement that he desires to maintain the subsequent application. In such case, the applicant shall be required to comply with the provisions of Article 1 (4) and the subsequent application shall be dealt with in accordance with the law and regulations of such country.

Article 4

If the first application has been filed in a country which does not issue novelty search reports generally or with respect to particular fields of inventions, the applicant may satisfy the requirements of Article 1 (3) by filing a novelty search report on the application issued by another contracting country or by the International Patent Institute of The Hague.

Article 5

Any applicant is entitled to file instead of a novelty search report issued by the Administration of the country of the first application a search report issued by the International Patent Institute of The Hague.

Article 6

The contracting countries undertake to harmonize their laws and regulations to the extent required to permit the establishment of a uniform application for a patent.

The International Bureau established by the Paris Convention, as revised at Stockholm on July 14, 1967, shall make recommendations toward such harmonization.

Article 7

The contracting countries undertake to keep the said International Bureau constantly advised with respect to their progress in efforts to facilitate novelty searches

generally or in particular fields, and the Bureau shall communicate such information to the other contracting countries and shall publish the same in its official publication.

Article 8

Each contracting country may determine to publish any application after the filing of the novelty search report or of the certificate provided for in Article 1 (3). Such publication shall give the number and date of filing of the first application, the number and date of filing of the subsequent application, the name of the applicant of the first and subsequent application and the summary of the invention.

Simultaneously with any such publication, the contracting country concerned shall advise the International Bureau and said Bureau shall effect a similar publication in its official publication.

Article 9

The International Bureau is authorized to engage in studies and plans, with the assistance of experts of the contracting countries, towards:

- (1) Uniform standards of novelty examination of patent applications;
- (2) Uniform requirements of form of specifications and claims;
- (3) Organization of a Central Search Center for novelty searches on a computerized basis;

with the view to adoption of future arrangements between the contracting countries to further develop international cooperation in the examination of patent applications.

Article 10

The contracting countries which have not yet adhered to the Convention of ——— establishing the International Patent Institute at The Hague, undertake to adhere to such Convention at the earliest possible time in order to permit such Institute to make novelty searches of a more extensive scope.

Article 11

This Arrangement shall be open to adherence by any member country of the Paris Union for the Protection of Industrial Property.

Computers, Programs and the Patent Laws

ROBERT O. NIMTZ*

SUMMARY

COMPUTER PROGRAMS ARE AND SHOULD BE PATENTABLE SUBJECT MATTER. An analysis of data processing by means of computer programs indicates that a new way of manipulating electrical signals is involved, and no more. Contrary to the Patent Office position, programs are patentable under the current laws, and proposed legislation to render them unpatentable should be withdrawn, at least until the issues involved are fully developed.

INTRODUCTION

ONE OF THE MOST SIGNIFICANT DEVELOPMENTS in the entire history of the United States patent system is taking place at the present time. The Congress of the United States, for the first time in its history, is considering a proposal to withdraw an entire field of technological

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activity from the protection of the patent laws. That field has been most inappropriately called "computer programs." Unfortunately, very few members of the patent profession are in a position to render a reasoned judgment in this area. This paper is an attempt to provide some basis for such judgments.

DATA PROCESSING AND PROGRAMS— TECHNICAL BACKGROUND

The Data Processing Field

In order to understand the position of computers and computer programs in the context of other technologies, it is necessary first to consider data processing in a more general sense. Modern electrical data processing was born at least 100 years ago when man first decided to transform some physical variable into an electrical analog. Samuel Morse, for example, transformed alphanumeric characters into patterns of short and long electrical signals for transmission of text over a long distance. Similarly, Bell transformed acoustic waves into electrical signals for transmission of voice over long distances. These electrical signals are "data" in that they represent, i.e. contain the same information as, the original stimuli. They can be recorded and analyzed, transformed into yet other physical analogs, and operated on. That is, they can be processed.

Obviously, therefore, data processing is not new. All of the communication systems (radio, television), all of the remote control systems (garage doors, missile guidance), and all of the data gathering systems (sonar, radar), are more or less primitive data processing systems. Because of the convenience of modern electrical technology, data is frequently gathered in the form of electrical signals and processing takes place in wired electrical circuits.

Data is frequently classified as being "analog" or "digital." The number of horses in a field is a digital datum, i.e., it is expressed as an integral number of some indivisible units. The area of the field, on the other hand, is different in that we can increase or decrease that area by any arbitrary amount. Data which is characterized by this continuum of values as analog data.

Analog computers operate on electrical signals which can vary over a continuous range, taking on many (theoretically infinite) values. These computers use the same kinds of circuits as are used in our radios, television sets, radar systems, and so forth.

Analog information can, however, be satisfactorily represented as digital data provided a suitable elementary counting unit is chosen. The area of the field, for example, can be specified as some integral number of acres, square feet, square inches, or even square thousandths of an inch, depending on the use we intend to make of the data. Similarly, an analog voice signal can be represented as a series of numbers corresponding to the amplitude of that signal from instant to instant. Some communication systems actually transmit voice signals in this numerical, digital form. Methods and apparatus for converting between analog and digital representations are available and many patents have been issued which are directed to processing data in this manner.

We can, therefore, process data in either analog or digital form. It is often very advantageous to choose the digital form.

The most recent apparatus developed expressly for digital data processing is called the "digital computer" and comprises a number of storage registers, processing units, input and output facilities, and program execution control circuitry.

Programs

- During the course of the discussion concerning this field, it has become increasingly apparent that little thought has been given to the underlying nature or character of that which the discussion concerns. In order to discuss these questions intelligently, at least a rudimentary knowledge of computers, programs and their position in the broader field of information manipulation must be acquired. In spite of the widely-held opinion that computers are vast, complex machines which defy normal understanding, an attempt will be made to impart at least a feeling for the fundamental concepts.

A modern general purpose digital computer is very large, very expensive and very fast. But, when all is said and done, the most advanced general purpose computer of today can carry on only a very few, very elemental machine operations. These elemental operations take the form of storing, moving, changing and comparing elemental electrical signals. The most sophisticated program for the most advanced computing machine can be analyzed into a long series of such elemental operations.

Why, then is so much excitement generated concerning these machines? If they are so limited in concept and operation, why should the economic, technical and legal fabric of our society be readjusted to take them into account?

The answer is that, by carrying out very many of these elemental operations at a very fast rate, very complex processing can be performed. The key, of course, is speed and accuracy. In the twinkling of an eye, the modern computer can perform millions of such elemental operations. In an hour, it can do billions, and its getting faster all the time. Vast capital investment, sophisticated electronic circuitry and the latest in materials and devices are all conspiring to provide ever greater speed and accuracy.

But speed, by itself, serves no useful function. In order to justify itself, the computer must be made to serve useful ends, to assist in the accomplishment of desirable objectives. But herein lies the complexity. These sequences of elemental operations must be ordered in carefully preselected patterns, they must be made the servant of man.

At a first and very elemental level, these machine operations must be ordered into relatively short sequences of more or less general usefulness. For example, if two input signals are used to represent numbers, several hundreds of these operations can be ordered in a particular sequence so as to produce a set of output signals representing the sum of the numbers represented by the input signals. This particular sequence, then, can be built into the machine such that a single trigger signal initiates the entire sequence.

Similarly, to multiply, to divide, to clear a register and to transfer the contents of a register are all of general usefulness. The computer designer, realizing this, constructs his machine to respond automatically to trigger signals with the appropriate sequences of machine operations.

Since a fair number of different operation sequences must be identified, the trigger signals take the form of numerically coded identification signals. The computer, then, is equipped with a decoder which interprets these numerical identification codes as orders to perform the identified sequences. These numerically coded signals are called instructions, commands or program order words. A sequence of such identification codes is a "program" and is called an "object program" or a "binary program" since these codes are in binary form for most modern machines. The user of the machine is relieved of a great deal of detailed work by his ability to specify long sequences of fundamental operations with a single numerical code.

As an increasing number of such short sequences were found to be of general use, the instruction repertoire of the general purpose computer grew. The hardware necessary to permit automatic response also grew. It soon became apparent, however, that numerical codes were very difficult for human beings to use. In handling long se-

quences of such numerical codes, many mistakes were made, resulting in wasted effort or erroneous results.

To ease this burden on the early users of computing machines, each numerical identification code was coupled with a string of alphanumeric symbols, preferably a mnemonic code, which served as an aid in recalling its function. The numerical code for the adding sequence, for example, could be called "ADD," the multiplying sequence "MPY," and so forth. With this symbolic notation, it was possible for computer users, i.e., programmers, to specify longer sequences with less likelihood of error. Programs written using these kinds of symbolic or mnemonic codes are called symbolic programs.

It will be noted that a one-to-one correspondence exists between these symbolic codes and the numerical identification codes. It is a relatively easy matter, then, to allow the computing machine itself to make the translation between the programmers' symbolic codes and the machine's numeric codes. A special program, called an assembly program, or an assembler, is loaded into the machine and operates on the symbolic code as input data to produce binary object code as output data. The object program itself can then be loaded into the machine to generate the desired sequences of fundamental operations.

It is interesting to note that the assembly program itself is an object program which may have been produced by another assembly program from symbolic codes generated by a programmer. It is evident that the data processing industry, and programming in particular, has been lifting itself by its own bootstraps since its inception.

Unfortunately, for most uses of even moderate complexity, even the symbolic code sequences become too long and laborious to produce. Moreover, a good deal of time is required to learn these symbolic codes and their proper use. In order to solve this problem, the so-called "higher order languages" were born. FORTRAN, COBOL and ALGOL, for example, include linguistic conventions which allow the programmer to specify what he wants done in a form more natural to himself. In FORTRAN, for example, an equation can be written with plus, minus and equal signs, much like a textbook equation. The computing machine is then called upon to construct the explicit instruction codes necessary to evaluate the formula. The computer is programmed to accept such formulae as input data and to generate the required symbolic and numeric codes as output data. The program necessary to perform this translation is called a "compiling program" or a "compiler." Like the assembler, the compiler is itself a sequence of coded instructions, "compiled" and/or "assembled" into numeric codes by similar programs.

At least two important trends in modern programming are readily perceivable. First, in making the computer available to more and more people, ever greater use is being made of higher order languages. In this way, very little training is required before a scientist, engineer, accountant or businessman can use the computer.

Those responsible for the efficient operation of the computer, on the other hand, desire greater freedom in specifying the short sequences of elemental operations called forth by the program instructions. Control over these elemental sequences is called "micro-programming" and is a feature of more and more of the newer generation of computers.

Once written for a particular machine, a program can be used many times to process different sets of data. Moreover, a particular program, if it has sufficiently general application, can become a subset of a larger program system. In this way, the most useful programs are accumulated at data processing centers and thereby serve a much wider set of users. A data processing system, i.e. a computing machine and the programs necessary to make it useful, tends to expand continually in size and capability, and to be continually refined, especially in the details of program coding.

In the early days of computing, the electrical circuits were connected together with wires and no easily changed programming device was included in the computer. This inflexibility was soon removed by using plugboard wiring. This was still much too slow and clumsy, and mechanically-driven paper tapes were used to store the codes specifying the operation of gates between the desired components. There was still a large difference, however, in operating times between mechanical input and output devices and the electronic operations inside of the computer. It was therefore decided that the operating instructions, i.e. the program, should be electronically stored within the computer and thus be available at electronic speeds. Such stored-program computers are by far the most versatile and widely-used of today's computers.

TERMINOLOGY AND DEFINITIONS

Much of the difficulty involved in discussing this field lies in loose usage of terminology. The word "program," for example, has been used indiscriminately to refer to the list of instructions on paper, the sequence of identification control codes fed into the computer, the "plan of action" embodied in the series of instructions, and even the operations the computer goes through in executing the instructions. Some of the terms involved will now be discussed.

Data, in general, is information represented in some physical form. In the electronic data processing art, data is a physical representation of information in a form suitable for operations by the data processing machine. This form can be electrical, magnetic, mechanical or optical, but is usually electrical or magnetic within the machine. While the information which is being represented may be considered mental or conceptual, the actual representation itself is physical, and must be physical to permit machine processing.

A computer is a data processor, i.e. a machine or apparatus which is particularly adapted for manipulating data in the form described above. Analog computers are machines adapted to manipulate data in analog or continuous form. Digital computers are machines adapted to manipulate data in digital or discrete form. A computer is said to be programmed when it is made to perform a particular sequence of operations. This may be accomplished permanently, by wiring the components of the computer together, or temporarily, by providing a replaceable constituent (a programming device) to direct the desired operations.

As noted above, the term "program" has many and varied meanings. In its most common meaning, a program is a list of commands, orders or instructions which specify the sequence of operations which the computer is to execute. Thus, a program is a description of a process. It can be recorded in many different ways, as a printed or handwritten list on paper, as holes in cards or tapes, as magnetic conditions on magnetic tape, or even as the state of components within the computer itself. Moreover, this description can be written in many different notations, including standard English text, artificially created symbolic languages, mathematical symbols, or pure numerical codes. If a program is thought of as a description of a process, the patentability of the *description*, apart from the process itself, is unthinkable.

It must be noted, however, that this program description, if it is recorded as the state of electronic components within the computer itself, not only describes the process, but has the inherent ability to actually cause the computer to carry out the process. That is, when a program is recorded in the proper notation, in an appropriate place, it effectively causes the execution of the process. It should be remembered, however, that the program, even in this case, is merely descriptive of something else, the process. However, due to the detailed form of this description, the program is able to cause the computing machine to alter the state of its structural components in specified ways so as to carry out the process.

It is also helpful to distinguish between the program, as described

above, a programming device, a programmable device, and a programmed device.

A programming device includes the physical storage medium upon which the program description is recorded. It is usually a deck of punched cards, a punched tape or a magnetic tape. In general, it is the program description written in a form which can be translated by a machine into a form effective for actual control of the process. As the art of pattern recognition progresses, it is possible that a handwritten list itself may become a programming device.

A programmable device, of course, is no more than the computer itself. Without a program loaded into the computer, it is useless, but even so it is a highly sophisticated, well-organized machine. It is a machine designed specifically to carry out data processing operations or steps. Each computer has associated with it a definite set of executable instructions, each one of which is called upon by a specific command. A program, of course, is no more than a list of such commands.

A programmed device is a computer with the programming device in place and available to direct the process. In wired computers, the "program" is the specific arrangements of the wires. A television set, for example, can be thought of as an analog computer with a "wired-in" program. In a stored program digital computer, the program is the coded sequence of instructions recorded in binary notation in the magnetic cores of the computer memory. The programmed device is a different device from the programmable (but unprogrammed) device. It is now useful for performing one specific data processing job. It has become a special purpose machine, albeit transitorily, by virtue of the program associated therewith.

It should be noted that a program, at least a symbolic or object program, is a description of a data processing method as it will be performed on a particular machine. That is, since the program is a sequence of instructions, and since each computer has its own unique set of permissible instructions, its own repertoire, so to speak, therefore a program is a description of a process as it is to be performed on one particular machine. Other machines, of course, have their own repertoire of instructions, not necessarily equivalent on a one-for-one basis, with the first machine. To perform the same data processing method on different machines, it is necessary to vary the details of the individual steps in order to take into account the vagaries of the particular machine in use. It has therefore become customary to describe data processing methods in sufficiently broad terms to avoid the absolute machine dependency of the program description.

This broader description of a data processing method, which is normally machine independent, or nearly so, is commonly called an algorithm. An algorithm, then, is a description of a data processing method which is independent of the details of any particular computer, assembler or compiler, on which or with which it may be practiced. Since the community of computer users must take into account the large number of different machines in use today, their dialogue with each other normally takes place by the use of algorithm descriptions. Useful, although usually not optimal, implementations of these algorithms on any particular machine by means of a program are most often straightforward and obvious. However, most algorithms can be implemented in many different ways, even on the same machine, and it is sometimes important to choose a particular one.

In view of the above discussion, the usual questions which center on the terms "program" and "algorithm" may be ambiguous. Much more significant and basic are the questions concerning methods of processing data by machine. Is the machine processing of data signals a statutory process under our current patent laws, and should such processes be excluded from those laws?

HISTORY IN THE PATENT OFFICE

The Patent Office, apparently, has never knowingly issued a patent directed to a "computer program, *per se*."¹ What is meant by this, it is assumed, is that the Patent Office has never issued a patent on a data processing method disclosed as being implemented by a programmed computer, and has never issued a patent on data processing apparatus disclosed as a programmed computer. Since it is not too clear yet just what the Patent Office means by the terms "computer" and "program," this allegation is highly speculative.

At any rate, the reasons originally given for the Patent Office position were that a program consists of mathematics or that it is a creation "in the area of thought" (mental), and hence not within the statutory classes. These reasons will be analyzed and discussed hereinafter.

In order to refine this line of reasoning and to insure uniform practice among its Examiners, the Patent Office published a set of proposed guidelines² and invited the patent profession to comment

¹ Testimony of Commissioner Edward J. Brenner before the House Judiciary Subcommittee with respect to H.R. 5924 (April 17, 1967).

² *Guidelines to Examination of Programs*, 829 O.G.1 (August 2, 1966).

thereon. Of the views expressed at the hearing³ set for that purpose, and the written comments submitted, almost all took issue with the proposed guidelines. The Patent Office has thus far avoided any further statements on the merits of the issue.⁴

A Commission established by Presidential Order⁵ for the purpose of considering changes in the patent laws recommended⁶ that the law be amended to ensure that "computer programs" would not be patentable.⁷ The reasons given by the Presidential Commission for their recommendation⁸ were:

- (1) Uncertainty now exists as to whether the statute permits a valid patent to be granted on programs;
- (2) The prior art cannot be searched because of the lack of a classification technique and search files, and the large volume of prior art;
- (3) Program development has been adequate without patent protection;
- (4) Copyright protection for programs is presently available.

These reasons will be investigated in a later portion of this paper.

An administration bill⁹ to implement this recommendation was introduced into Congress on February 21, 1967, and hearings commenced on April 17 in the House and in the Senate on May 17.

THE PRESIDENTIAL COMMISSION AND SECTION 106

The Commission Report

As previously noted, a commission established by the President of the United States has recommended that:

A series of instructions which control or condition the operation of a data processing machine, generally referred to as a "program," shall not be considered patentable regardless of whether the program

³ Hearing on October 4, 1966, Rm. 3886-B, Main Commerce Building, Washington, D. C.

⁴ In his testimony before the House Subcommittee (*supra* note 1), Commissioner Brenner stated that §106 of the proposed bill (*infra* note 9) would codify the Patent Office interpretation of the law.

⁵ Executive Order No. 11215, April 8, 1965.

⁶ "To Promote the Progress of . . . Useful Arts" in *An Age of Exploding Technology*, Report of the President's Commission on the Patent System (Washington, D. C.: G.P.O. 1966).

⁷ *Ibid.*, Recommendation IV-3, p. 12.

⁸ *Ibid.*, p. 13.

⁹ §106, Senate Bill S.1042; House Bill H.R. 5924, introduced February 21, 1967.

is claimed as : (a) an article, (b) a process described in terms of the operations performed by a machine pursuant to a program; or (c) one or more machine configurations established by a program.¹⁰

In view of the above discussion, the prohibition in these terms indicates a failure to come to grips with the ultimate question. If a "program" is no more than a "series of instructions," then it is clear that it is merely a description of a process. The likelihood of anyone attempting to secure a *patent* on the description of a process independent of the process itself seems rather remote. It is the process, after all, which contributes to the art and which represents commercial value.

The recommendation goes on, however, to the "regardless of whether" clause. It is clear that a program, defined as the recommendation defines it, could not be *claimed* as an article, process or machine configuration and yet remain a "series of instructions." The intent of the language seems to be that, if an article, a process or a machine configuration is, or can be, or must be, described by a series of instructions for a data processing machine, then that article, process or machine configuration is not patentable. When it is recalled that any process or apparatus that can be thus described can also be described in many alternative fashions, the effect of this recommendation on patent prosecution is not clear. What is clear, however, is that no court would be able to find infringement of any claim, however disclosed and prosecuted, in the programmed operation of a computer. If this is the effect desired, a simple statement to that effect would have been more welcome.

The Commission's report gave four reasons for their recommendation. These will be taken up in order.

- (1) . . . Uncertainty now exists as to whether the statute permits a valid patent to be granted on programs. . . .¹¹

If diversities of opinion indicate uncertainty, then there certainly is uncertainty in this area. The diversities, however, usually proceed from other grounds than statutory interpretation. Computer manufacturers oppose the issuance of "program" patents to encourage sales of their machines. The Patent Office opposes this kind of protection because of the attendant increased burden on their already-strained facilities. The small software (program) supplier is in favor of patents to protect his product in the marketplace. If the uncertainties are to be resolved, they are best resolved in the tribunals devised and

¹⁰ See note 7.

¹¹ *Op. cit. supra* note 6, p. 13.

maintained for just that purpose, the courts and administrative boards. Indeed, since the statute would not be retroactive, the Patent Office and the courts will be required to resolve these uncertainties in any event, on the basis of already-filed cases.

In a larger sense, uncertainties in the law have historically been resolved by the normal workings of the judicial system. This allows the issues to be developed naturally from real situations, allows adequate opportunity for debate, and prevents decisions on terminology rather than substance.

- (2) The Patent Office now cannot examine applications for programs because of the lack of a classification technique and the requisite search files. . . .¹²

Although this is initially true of *every* new technology, the Patent Office has thus far *always* succeeded in overcoming this problem. Clearly, of course, the problem will never be solved if the Patent Office refuses, as it has for the last 20 years, to address itself to the problem. Industry, however, has had the same problem and has, by and large, evolved classification techniques and search files. Presumably they are available to the Patent Office if the Office desires to use them.

More fundamentally, the fact that patents are to be outlawed in the area of computer programs does not remove this body of art from existence. The Patent Office is charged with the responsibility of examining applications and making searches for pertinent prior art. The fact that a programmed computer might be unpatentable clearly does not prevent that programmed computer from rendering a circuit implementation obvious and hence unpatentable. Thus, if the patent system is to continue, reliable searches in this area are essential.

On the other hand, not all "programs" have to be searched any more than do all circuits. The inventive, the innovative, the best in the programming art, as in any other art, does not suffer from a paucity of publicity. Learned journals exist in this field just as well as in any other. Moreover, technical people qualified to do such searching are being graduated from technical schools every day. The Patent Office already has on its staff junior Examiners with these qualifications. There is a scarcity of qualified personnel, to be sure, but this situation will resolve itself in time since every scientific and engineering student today is being exposed to this field.

- (3) . . . the creation of programs has undergone substantial and satisfactory growth in the absence of patent protection. . . .¹³

¹² *Op. cit. supra* note 6, p. 13.

¹³ *Op. cit. supra* note 6, p. 13.

This statement is obviously speculative, based on some assumption regarding growth *with* patent protection. The growth of transistor technology, for example, has been just as great, or greater, and that field has been subject to the patent laws since its inception. Indeed, an argument can be made that the growth in the transistor field has been much healthier than the growth of the computer field and in no small measure is responsible for the latter.

On the other hand, the computer manufacturers today are having great difficulty supplying the programs necessary to operate their most advanced computers. Who can say how much farther ahead the software industry would be if competition supported by clear patent protection had been the case?

More fundamentally, the proposition that a field, any field, can best be advanced by relying on workers in the field giving away the best fruits of their efforts, is, to say the least, somewhat naive. A businessman, for example, who has, at great expense and after a protracted period, gained a competitive advantage by reason of a computer program, cannot realistically be expected to give it away to his competitors. This becomes even more fanciful when that businessman is a software supplier and the program is the very article he wishes to market. Indeed, this same argument would seem to imply that the entire patent system should be eliminated.

(4) . . . copyright protection for programs is presently available. . . ¹⁴

This statement is manifestly inaccurate. Although the Register of Copyrights has agreed to accept certain programming materials for registration, this is hardly proof that copyright protection is available. The extent of protection, if any, available under the copyright law will not be known until the courts rule on the matter. Difficult questions, such as when is a program "copied," what are proper penalties, et cetera, remain and can only be decided in actual cases before a court of law. Even the proposed copyright law¹⁵ requires this type of interpretation.

Even more fundamentally, to what extent are the copyright laws intended to protect such subject matter? Written, eye-readable versions of programs seem clearly to be "writings" as that term has been broadly interpreted. Punched card and magnetic tape versions, however, while currently being accepted for registration, come rather close to being primarily utilitarian. Furthermore, the copyright extends

¹⁴ *Op. cit. supra* note 6, p. 13.

¹⁵ House Bill H.R. 2512, introduced January 17, 1967.

only to the specific expression. Any other programmer can easily change the form of this expression and still retain much or all of the advantages of the original. That is, the technological and economic value of an inventive program, the only reason why anyone would bother to copy it, does not usually even lie in the particular expression protected. Rather, it lies in a particular way of processing data, innumerable expressions of which are possible. The copyright laws, therefore, seem to be of very limited usefulness for protecting the real value in program subject matter.

Section 106

Section 106 of the proposed patent laws reads as follows:

§106 Computer programs not patentable

A plan of action or a set of operating instructions, in whatever form presented, to cause a controllable data processor or computer to perform selected operations shall not be patentable.¹⁶

It appears clear that this statute would render all programs, methods and machine configurations, which processed data, unpatentable, and thus achieve the goal of the Presidential Commission. It is not clear, however, how much other technology would be excluded under the statute. Analog computers, for example, have no "set of operating instructions," but clearly do have a "plan of action" which causes them to "perform selected operations." Pulse-code-modulation encoders are digital data processors which also have a "plan of action." Possibly even radios and television sets process data according to a plan of action.

More basically, the idea of removing a field of technology from the scope of protection afforded by the patent system by special statute for such reasons is without precedent¹⁷. Granting the complexity of this field, what effect will this precedent have on future decisions when other, still more complex, technologies are devised? Is there, after all, an absolute ceiling in technological sophistication beyond which the patent system of the United States will no longer be operative? It is difficult to believe that this is so.

It is even more difficult to understand the necessity for this drastic surgery at a time when the Patent Office, presumably one of the most

¹⁶ See note 9.

¹⁷ The prohibition of patents on certain inventions relating to atomic weapons (42 U.S.C. 2181) was obviously justified on a completely different basis.

competent experts in this area, is still insisting that the subject matter is unpatentable under existing law. Moreover, a dialogue between the Patent Office and the patent bar on this very question has just now been entered.¹⁸ Resolution of the issue before the clarifications which could result from such a dialogue is certainly premature.

It is noted that the President of the United States, in his letter of transmittal¹⁹ on the Patent Reform Act of 1967 (of which Section 106 is a part) to the Congress, introduces the subject as follows:

This important measure is designed to aid America's economic growth, by strengthening the U.S. Patent System.

From the earliest days of our Republic, the patent system has played an indispensable role in stimulating the Nation's progress and prosperity. It has spurred the creative work of inventors and scientists. It has fostered the most far-reaching technological advances in the history of civilization. It has helped American business to translate "the fire of genius" into the products and processes that have enriched the lives of all of us.

The entire tenor of Section 106 is directly contrary to these assertions. Removing an important field of technology is an unusual way to "strengthen" the patent system. If patents "play an indispensable role in stimulating the Nation's progress and prosperity," it is difficult to see why these benefits should not also be extended to data processing. Programmers, just as well as any other inventors need a "spur to their creative work." More significantly, in the field of data processing, just as in other fields, patents can "foster the most far-reaching technological advances in the history of civilization" and "help American business to translate 'the fire of genius' into the products and processes" which will someday "enrich the lives of all of us."

PATENTABILITY UNDER THE PRESENT LAW

In view of the attitude of the Patent Office, large uncertainties do remain concerning the patenting of programming subject matter under the current law. With no judicial decisions to directly support the Patent Office, considerable room for opinion remains. The following is presented as one alternative approach to this subject matter, at least as well supported in theory and in law as is the Patent Office position. It is divided into three parts, the first part discussing the so-called public policy aspects of the question, the second and third taking up the principal legal objections of the Patent Office.

¹⁸ See *supra* notes 2 and 3.

¹⁹ Reported at 836 O.G. 403.

Statutory Classification

At the outset it should be stated that it is this writer's considered opinion that the machine processing of data is a "useful art" within the meaning of Article 1, Section 8, of the United States Constitution, and a "useful process" within the meaning of Section 101 of Title 35 of the United States Code. When the thesis is stated in this way, misleading assertions about the patentability of "programs" are avoided. At the very least, attention is directed to the reality to be considered, and not the particular linguistic conventions used to describe that reality. This thesis, moreover, has more than adequate support in the history of the patent laws.

Even a cursory review of the history of the patent laws of this country indicates a continual expansion of the meaning of the phrase "useful arts" to include the economically useful technological activities of each generation. Convinced, along with the framers of our Constitution, that patents *do* serve to "promote the progress of science and useful arts," the United States Supreme Court has extended the statutory classification to a multitude of new arts never conceived of by the framers of the statutory language. In 1843, for example, the Supreme Court held that the patent laws extended to cover metallurgical processes,²⁰ in 1853 to chemical processes,²¹ in 1877 to food processing,²² in 1887 to mechanical processes,²³ and in 1888 to electrical processes.²⁴ Thus, as the various new technologies were introduced, the patent laws were used to assure their growth and to bring their benefits to the American people.

Another technological breakthrough has taken place. Data processing has become a technology in its own right, and is no longer merely an appendage to other technologies. No one today can doubt the importance of this new technology nor the fact that it will produce profound effects on each and every person in this country. Indeed, it has the potential for creating a greater effect on the quality of human life than any of the other technical advances mentioned above. It may even occur that many of these other technologies will themselves become so dependent upon data processing as to be considered subsidiary arts. It would therefore be no less than catastrophic if the patent laws failed to perform their usual function as midwife to this

²⁰ *McClurg v. Kingsland*, 42 U.S. 202.

²¹ *Corning v. Burden*, 56 U.S. 252.

²² *Cochrane v. Deener*, 94 U.S. 780.

²³ *Eames v. Andrews*, 122 U.S. 40.

²⁴ *The Telephone Cases*, 126 U.S. 1.

emerging art. The *possibilities* of suppression of innovation, secrecy and stagnation are just as real in this technology as in any other, and maybe even more so. The *effects* of such suppression, secrecy and stagnation, however, will manifestly far exceed such effects in most other fields.

The often-cited criterion for a statutory process under the patent laws appears in *Cochrane v. Deener*,²⁵ at page 787:

A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery. In the language of the patent law, it is an art. The machinery pointed out as suitable to perform the process may or may not be new or patentable, whilst the process itself may be altogether new, and produce an entirely new result. The process requires that certain things should be done with certain substances in a certain order, but the tools to be used in doing this may be of secondary consequence.

Data processing is a "mode of treatment" of data. Data, as noted above, is a physical manifestation of information. Indeed, it is only by rendering information in a physical, concrete form that machine processing becomes possible. In a modern computer, it is the physical data (in the form of electrical signals, for example) which are manipulated, and not the information. This bears repeating. A computer is a machine, a machine for processing concrete, physical things, and does not and cannot process abstract mental concepts.

The definition in the *Cochrane* case therefore seems to be eminently satisfied. The machine processing of data truly is a "useful art" under the Constitution. Indeed, if the data is in the form of analog signals, and if the processing machine is programmed by its wiring, no one would argue that data processing in that case was nonstatutory. It is difficult, then, to understand the position that, if digital signals are substituted for analog signals, and if the machine is programmed by coded signals, the data processing becomes nonstatutory. The apparatus available for practicing a process, and the control mechanism associated with that apparatus, do not change the nature of what is being done. It is the machine processing of signals, and no more.

Mental Steps

The Patent Office has argued, and continues to argue, that a

²⁵ See note 22.

"program" is no more than a sequence of mental steps, long held to be nonstatutory. Again we find the term "program" used to obfuscate rather than elucidate the basic question involved. The real question is, should we consider the machine operations necessary to process data as "mental steps"?

The mental step doctrine was developed in a long line of cases including the leading cases of *Haliburton v. Walker et al.*,²⁶ *In re Abrams*,²⁷ and *In re Shao Wen Yuan*.²⁸ In each of these cases, the fact situation was such that the alleged "mental steps" actually took place in the mind of a person. The courts felt that such acts were unsuitable for patent control. As stated in the *Haliburton* case (*supra* page 821):

. . . anybody with a rudimentary knowledge of arithmetic will be able to do what Walker claims a monopoly of doing.

Similarly, in the *Abrams* case (*supra* page 167), the court commented that

. . . the sole question is whether the novelty thus assumed is the result of a physical act or is simply a mental concept.

The *Yuan* case (*supra* page 382) quotes with approval from *In re Heritage*²⁹:

Such purely mental acts are not proper subject matter for protection under the patent statutes. . . .

It therefore appears that the "mental step" doctrine is only applicable in those fact situations in which the method steps actually take place in the mind of man. That is, a method step is mental if it requires, for its execution, the exercise of the interpretative, aesthetic or judgment faculties of a human being. It is only under this interpretation of the rule that the rationale for its formation remains valid.

Arguments that the computer imitates a human being in its action and produces the same results as a mental step serve to emphasize the basic contribution of this technology. All technology has, for its basic purpose, the removal of burdens from human beings. The fact that this technology removes a most difficult burden from the minds of some of our best-educated citizens should certainly not be an argument against patentability. The Patent Office Board of Appeals seems to agree. In *ex parte Monroe*,³⁰ the Board held that the step of

²⁶ 146 F.2d 817 (C.A.9 1944).

²⁷ 188 F.2d 165 (C.C.P.A. 1951).

²⁸ 188 F.2d 377 (C.C.P.A. 1951).

²⁹ 150 F.2d 354 (C.C.P.A. 1945).

³⁰ 105 USPQ 376 (BA (1955)).

“measuring,” which could be done mentally, but which was disclosed as being done by apparatus, was not a mental step requiring condemnation of the claim (*supra* page 377).

It therefore appears that the steps of a data processing method, disclosed as being performed in a computer, are not mental steps within the meaning of the mental step doctrine. This conclusion is reinforced by a consideration of the term “mental.” Once the meaning of this word loses the import of taking place in the mind, we are left without any real criterion of its content. If, for example, a step can be characterized as “mental” even though the only means for performing the step is a senseless machine, then what new meaning are we to ascribe to the word “mental”? Are we to decide that those things that could only be done mentally 20 years ago (at the birth of the electronic digital computer) are forever to be considered mental steps? This is indeed a strange interpretation of “promoting the progress of science and the useful arts.”

Mathematics

The other ground on which data processing methods are attacked is that they are mathematical formulae or calculations. This, however, is another attempt to extrapolate a rule of law out of the context which gave it sense and meaning. It is easily granted that a mathematical formula, as such, is not patentable. It is not a process, machine, manufacture or a composition of matter (35 U.S.C. 101). To characterize a process as mathematical, however, is not the same thing. A process, as noted above, operates on certain subject matter and specifies certain types of acts to be performed thereon. The fact that mathematical symbols, as well as linguistic symbols, can be used to describe the process should hardly be determinative. Mathematics, after all, is a language, a language, moreover, which large numbers of mathematicians are attempting to extend to all of the processes which come within their purview. All of quantitative reality, and hence all inventions in any field, are theoretically subject to mathematical description. Chemical equations, for example, are quantitative descriptions of chemical processes, yet no one would argue that chemical processes are thereby made nonstatutory.

It is important to distinguish between descriptive mathematical expressions and the reality which is thereby described. If the mathematics describe an otherwise patentable process, the mere fact that this added description was devised does not render it nonstatutory. On the

other hand, if the mathematics describes a "law of nature" (e.g., $e = mc^2$), which is nonstatutory, the mere fact that it can be so represented does not render it patentable. The patentability of a data processing method, therefore, should be determined by its novelty and unobviousness in view of prior art data processing methods, whether manual, mental, analog or digital, and not on the mere fact that it can be described mathematically.

CONCLUSIONS

Data processing is not new. Analog, and even digital, processing of data antedated the modern digital computer. Programming an electronic digital computer to perform data processing is merely one more way in which the result can be achieved. Programs are merely linguistic conventions for describing this new alternative. Algorithms are merely more general descriptions of data processing methods.

It is believed that the significant question dealing with this field can be best cast in the following form. Are methods and apparatus for the machine processing of data appropriate subject matter for patents? Questions dealing with "programs," "series of instructions," "plans of action" and so forth, deal more with form than with substance.

The Patent Office has historically refused patents to program subject matter. A Presidential Commission has recommended that "programs" not be patentable. The Administration has sponsored a bill in Congress intended, in part, to render "programs" unpatentable.

The reasoning of the Presidential Commission seems to be fallacious. Uncertainties in the law, such as there be, can best be resolved in the traditional manner, by court decisions, and not by enactment of a statute. The Patent Office not only *can* search this subject matter, but *must* do so regardless of the patentability of "programs." The relative rapidity of technological growth without patent protection is not at all apparent and, indeed, to expect free disclosure without reward is unrealistic. Copyright protection for programs is highly speculative at the present time and seems to provide only very limited protection at best.

It is believed that the machine processing of data is statutory subject matter under existing laws. The continual extension of these laws to new technologies, the satisfaction of the technical requirements for patentability, and the close similarities to accepted statutory classes, all tend to support patentability. The mental step doctrine is not applicable to machine operations. Mathematical descriptions of processes, as

well as apparatus, should not be used to excuse a failure to consider the reality described. It is this reality which must fall into one of the statutory classes.

In view of all of these considerations, it is believed that, at the very least, no statutory exclusion should be enacted until the issues are adequately clarified. No irremediable harm can be done if a reasonable time is left for the determination of patentability under the current law. Indeed, whatever the decision, the necessary debate will clarify the real issues involved. On the other hand, a premature statutory rejection of this field could do irreversible harm.

STUDENT PAPERS

By making available student papers, students will receive an incentive and our readers will appreciate the evidence of scholarly development in the fields of interest. These papers are carefully reviewed by the Editorial Committee and other specialists, and helpful suggestions are made to the students as part of the educational function of *IDEA*. The Research Institute invites educational and research institutions to submit informative student manuscripts on the patent, trademark, copyright, and related systems.

Copyright Infringement by Literature Storage and Retrieval Systems*

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SUMMARY

WITH THE ADVENT OF NEW TECHNOLOGY it is becoming more prevalent to store copyrighted works of literature in various types of "computer" systems. This paper considers whether any of the tech-

* This paper was prepared in fulfillment of the Second Year legal writing requirement at Georgetown University Law Center and has been awarded the Law Center's first prize in the 1967 Nathan Burkan Memorial Copyright Competition. The Competition is sponsored annually by the American Society of Composers, Authors & Publishers.

niques used in the mechanized storage and retrieval of literary information constitute an infringement of copyright. The questions and issues involved in the use of literature storage and retrieval systems are considered under both the present copyright law and a proposal for copyright law revision.

INTRODUCTION

THE PROBLEMS OF DOCUMENTATION AND INFORMATION RETRIEVAL are becoming more oppressive each year. For example, in the area of research and development each researcher must have ready access to information on all prior work which has been done in his field,¹ even though the amount of research work done in the United States each year is staggering. In 1965 the United States government alone spent over 15 billion dollars on research and development.² A further complication is that the direct result of most research projects is more literature which simply adds to the already overwhelming problems of information storage and retrieval.

One approach to handling the "information explosion" is that of thoroughly abstracting and indexing all publications in a given field.³ However, eventually the problem will not simply be how to locate information, but where to store the documents themselves. For example, a few years ago Harvard, Yale and Columbia Universities tied their medical school libraries into a common computer system to enable the exchange of literary information.⁴ Recently, the *Wall Street Journal* reported that "two New York State libraries began telephone line transmission of document facsimiles between themselves, a network that will be expanded to 12 libraries. Then one original could serve all 12 libraries."⁵

It is foreseeable that, in the near future, the problems faced by libraries and literature research services will be impossible to solve

¹ 111 Cong. Rec. 28113 (1965) (remarks of Senator Hart).

² See H. Meyerhoff, "Interests of the Researchers," in *Reprography and Copyright Law*, Vol. 119 (1964), p. 119, p. 121.

³ See generally, L. Naturman, "Input and Output Technical Information Retrieval," *SPE Journal*, Vol. 21 (1962), p. 17.

⁴ Phillips, "Computer Network to Link Three Medical Libraries," *New York Times* (March 5, 1965), p. 1.

⁵ Stabler, "Growing Reproduction of Books, Periodicals Is Worrying Publishers," *Wall Street Journal* (May 2, 1967), p. 12.

using conventional storage methods. Even today there are a large number of literature storage and retrieval systems commercially in use.⁶ For example, the systems available vary from a desk-top microfilm file reader giving 4-second access to any one of 70,000 pages,⁷ to a mechanism for storing television images of documents on magnetic tape.⁸

As technology advances, the use of computers and other sophisticated devices is becoming more and more common for literature storage and retrieval. The purpose of this paper is to investigate the copyright problems raised by the use of these modern storage techniques, both under the law as it now exists and under the proposals for copyright law revision.

THE PROBLEM UNDER THE PRESENT COPYRIGHT STATUTE

The Copyright Law secures to one who owns a copyright the exclusive rights, among others, to: print, reprint, publish, copy and vend the copyrighted work;⁹ to translate the copyrighted work into other languages or dialects, or to make other versions;¹⁰ and, to make or procure the making of any transcription or record thereof by or from which, in whole or in part, it may in any manner or by any method be exhibited, delivered, presented, produced or reproduced.¹¹

Under each one of these exclusive rights, the production of a "copy" of a copyrighted work would constitute an infringement. Therefore, whether the steps of (1) input, (2) search and recall, and (3) output used in a literature storage system involve the making of a "copy" within the meaning of the statute is a significant question.

Literary information may be stored in a variety of ways. Optical methods of storage, e.g., microfilm, are probably the most common with the stored material having the same general appearance as the original, only reduced in size. In electronic storage, however, literary information is generally converted from alphabetic characters to a sequence of numbers by a special typewriter¹² which punches combi-

⁶ See e.g., *Current Research and Development in Scientific Documentation*, National Science Foundation, Vol. 13 (1964), p. 241.

⁷ H. Hoadley, "Rapid, Compact, Automatic Retrieval-Display System," *Photographic Science and Engineering*, Vol. 10 (1966), pp. 358-59.

⁸ C. Steinberg, "Role of Videofile Filing System in Report Retrieval," *WESCON Technical Papers*, Vol. 9 (1965):

⁹ 17 U.S.C. § 1(a) (1964).

¹⁰ *Id.* § 1(b).

¹¹ *Id.* § 1(c).

¹² A great deal of work is being done toward the development of a system which

nations of holes into a card. The information may be stored in the form of punched cards or the holes in the card can be converted into electronic impulses which may be stored, for example, in the form of polarized spots on a magnetic tape or magnetically polarized ferrite cores in a memory array. When an output from the system is desired, the stored impulses may be reconverted into alphabetic characters by a printer; or they may be used to create an optical display on a screen.

Input of Literature into a Storage System

The first step in literature storage is that of entering information into the storage system. "Input" involves two major questions: (1) the nature of the material being stored (e.g., verbatim texts of publications or conceptual abstracts) and (2) the method of storing the material (e.g., punched cards, magnetic tape or microfilm).

Nature of the Material Stored

As to the nature of the material being introduced into the storage system, the material must be a "textual copy" of the copyrighted work before an "infringing copy"¹³ of the work can be created through the input of information into the system. That is, unless the arrangement of words to be stored is sufficiently alike that of the copyrighted work, the possibility of infringement by "copying" during input is automatically precluded, regardless of the method of input used. If the copyrighted work is abstracted or condensed before storage, the question arises as to whether or not the condensation is an abridgement, and therefore not an infringing copy.¹⁴

In the early English case of *Gyles v. Willcox*,¹⁵ it was said that "Abridgements may with great propriety be called a new book, because . . . the invention, learning, and judgment of the author is shown in them. . . ."¹⁶ The same principles are embodied in *Folsom v. Marsh*¹⁷ where it was held that an abridgement comprising a substan-

will optically "read" printed text and convert the characters directly into electronic impulses. See, e.g., U. S. Patents No. 3,112,468; 3,181,120; and 3,250,172.

¹³ 17 U.S.C. § 1 (a) (1964).

¹⁴ See generally, E. Garfield, "Abstracting and Problems of Copyright" in *Reprography and Copyright Law*, 1964, p. 112; H. Roberts, "The Law on Abridgement of Copyrighted Literary Material," *Kentucky Law Journal*, Vol. 30 (1942), p. 297.

¹⁵ 2 Atk. 141, 26 (1741), *Eng. Rep.* 489.

¹⁶ 2 Atk. at 143, 26 (1741), *Eng. Rep.* 490.

¹⁷ 9 F. Cas. 342 (No. 4901) (C.C.D. Mass. 1841).

tial condensation of an original work was not an infringement of copyright if the condensation was the product of intellectual labor and judgment.

Although the law extends no protection to an idea alone,¹⁸ the dividing line between an idea and the expression of that idea in words is very indistinct making the requirements of an abridgement difficult to define.¹⁹ Further, because of the difficulty of definition and the fact that any abridgement tends to dilute an author's protection by decreasing the need for the original work, some commentators have argued that *no* unauthorized "versions" of a work should be legally sanctioned.²⁰ This view, however, would seem to extend the scope of the copyright law to encroach upon the public interest by allowing an author to monopolize an idea, not a means of expression.²¹

It is apparent, however, that as the form of the input material to a storage system approaches the verbatim text of a copyrighted publication, as it would in a library situation, the *possibility* of copyright infringement exists. The fact of infringement will turn on other considerations, such as the method of storage or the techniques used in introducing material into the system.

Assuming the storage of verbatim text in a machine to eliminate abridgement problems, the mathematical coding of words used to store literature presents a further question regarding the nature of the material. The law secures to a copyright owner the right "to translate the copyrighted works into other languages or dialects. . . ."²² Could

¹⁸ *Caddy-Imler Creations, Inc. v. Caddy*, 299 F.2d 79, 132 USPQ 384 (9th Cir. 1962); *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121, 7 USPQ 84, 87 (2nd Cir. 1930) (L. Hand, J.); *Richards v. Columbia Broadcasting System, Inc.*, 161 F. Supp. 516, 117 USPQ 174 (D.D.C. 1958); *Alexander v. Irving Trust Co.*, 132 F. Supp. 364, 106 USPQ 74 (S.D.N.Y.), *affirmed*, 228 F.2d 221, 108 USPQ 24 (2nd Cir. 1955) (author of article in scientific journal not entitled to monopoly of ideas expressed therein).

¹⁹ Some criteria of a true abridgement were given in *Folsom v. Marsh*, 9 F. Cas. 342, 345 (No. 4901) (C.C.D. Mass. 1841), in which Justice Storey said:

It is clear that a mere selection, or different arrangement of facts of the original work, so as to bring the work into a smaller compass, will not be held to be such an abridgement. There must be a real, substantial condensation of the materials, and intellectual labor and judgment bestowed thereon; and not merely the facile use of scissors; or extracts of the essential parts, constituting the chief value of the original work.

²⁰ W. Copinger, *Law of Copyright*, 126 7th ed., (1936); E. Drone, *The Law of Property in Intellectual Productions* 440 (1879).

²¹ See J. Banzhaf, III, "Copyright Protection for Computer Programs," *ASCAP Copyright Law Symposium*, No. 14 (1966), pp. 118, 134-135.

²² 17 U.S.C. § 1 (b) (1964).

it be successfully argued that the machine "language" of binary electronic pulses or punched card hole combinations is a language within the statute? Certainly most code schemes and mathematical languages are widely used and are as familiar to those skilled in their use as conversational grammar. The fact that a "language or dialect" is constructed upon ordered mathematical relationships should not make it any less of an "expression that conveys an idea" (and hence a language)²³ even though it is used for conveying ideas to a machine rather than a human being.

Method of Storage

As to the method of storing literary material within a memory, the type of storage medium and input chosen may possibly determine whether a "copy" is made at the point of input to the system. In the case of *White-Smith Music Publishing Co. v. Apollo Co.*²⁴ it was held that a punched paper tape comprising a "piano roll" was not a "copy" of a printed musical composition. The court felt that since a punched tape could be read and understood only by a person with particular skills, it was not a system of "intelligible notation"²⁵ and hence not a "copy." The piano roll did not come "so near to the original as to give every person seeing it the idea created by the original."²⁶

The court in *Apollo* cited two principal American cases²⁷ and based its decision upon a construction of the copyright statute under what it felt to be the Congressional intent in the light of those cases.²⁸ Additionally, the court noted that its decision in *Apollo* would be in accordance with the policy adopted by the signatories to the Berne

²³ *Webster's New International Dictionary* 2nd ed., (1957), p. 1390.

²⁴ 209 U.S. 1 (1908).

²⁵ *Id.* at 17.

²⁶ *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1, 17 (1908), *citing with approval*, *West v. Francis, Barn. & Ald.* Vol. 5, pp. 737, 743; *English Reporter* Vol. 106, (K. B. 1822), pp. 1361, 1363.

²⁷ *Stern v. Rosey*, 17 App. D.C. 562 (1901); *Kennedy v. McTammany*, 33 Fed. 584 (C.C.D. Mass. 1888), *appeal dismissed for failure to print record*, 145 U.S. 643 (1892). *See also*, *Boosey v. Whight* [1900] 1 Ch. 122.

²⁸ The court observed that Congress had not amended the copyright law in response to the *Stern* and *Kennedy* cases which held, respectively, that a phonograph record and a punched paper roll for an organette were not copies of a printed musical composition. Further, the court noted that Congress had known of the methods of music reproduction used by music boxes and pipe organs at the time they enacted the last amendment to the copyright law, and if their intent was to provide protection from such techniques of piracy, it would have been specifically included within the statute.

Copyright Convention of 1886,²⁹ which was undoubtedly well known to Congress at the time the copyright statute was enacted.

The injustice done to some copyright owners by the decision in *Apollo* was recognized by Congress the following year by providing a limited form of protection against mechanical means of reproduction.³⁰ However, *Apollo* seems to have been followed, and it has been subsequently held that a phonograph record is not a "copy" of a musical composition because it cannot be "read."³¹

While some commentators have argued that computer programs³² and videotapes³³ should be excepted from the rule in *Apollo*, others have concluded that the case remains as viable as ever and would preclude systems of "unintelligible notation" from being copies or copyrightable.³⁴ It is submitted that under the rule of *Apollo* the making of punched cards,³⁵ punched paper tapes, magnetic tapes³⁶

²⁹ The reproduction of music by mechanical instruments was specifically excluded from being an infringement under the Berne Copyright Convention and, although the United States was not a party to the Convention, to grant protection against "piano rolls" in *Apollo* would be to give foreign composers rights in this country that would be denied, under the Convention, to United States composers abroad. *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1, 14-15 (1908); see Act of March 3, 1891, ch. 565, § 13, 26 Stat. 1110; Convention for the Protection of Literary and Artistic Works, Final Protocol § 3, Dec. 9, 1886, translated in II Ladas, "The International Protection of Literary and Artistic Property," *Harvard Studies in International Law No. III* (Cambridge: Harvard University Press, 1938), pp. 1123, 1131-32.

³⁰ The amended statute provides that an owner of a musical copyright may initially prohibit mechanical reproduction, but once he has permitted his composition to be mechanically reproduced by one person, anyone may make similar use of it upon payment of a fixed statutory fee. Act of March 4, 1909 § 1 (e), 17 U.S.C. § 1(e) (1964).

³¹ *Capitol Records, Inc. v. Mercury Records Corp.*, 221 F.2d 657, 105 USPQ 163 (2nd Cir. 1955) (L. Hand dissenting).

³² Banzhaf, *op. cit. supra* note 21, pp. 118, 161-162.

³³ B. Fritch, "Some Copyright Implications of Videotapes," *Southern California Law Review*, Vol. 37 (1964) pp. 214, 235; W. Meagher, "Copyright Problems Presented by a New Art," *N.Y.U. Law Review*, Vol. 30 (1955) pp. 1081, 1093.

³⁴ W. Meagher, "Copyright Problems Presented by a New Art," *N.Y.U. Law Review*, Vol. 30 (1955) pp. 1081, 1092; A. Seidel, "Computers: Antitrust, Patent and Copyright Law Implications," *Antitrust Bulletin*, Vol. 6 (1961), pp. 549, 558. But see, Colby, "An Historic 'First'—Copyright Office Accepts Magnetic Video Tape for Registration," *Bulletin of the Copyright Society of the U.S.A.* Vol. 8 (1960), p. 205.

³⁵ It is to be noted that computer data cards may be simultaneously punched and printed with characters corresponding to the hole combinations. In this case the doctrine of *Apollo* would no longer apply and the cards would be copies of the work being incoded.

³⁶ According to Reed C. Lawlor, an authority in the field, it is possible that a skilled person using the proper techniques may be able to visually "read" a

and the like for input to a storage system probably would not constitute the making of a "copy" so as to be a copyright infringement of a printed text. In the light of subsequent cases³⁷ and in the absence of further legislation, it would be difficult indeed for a court to depart from the doctrine set forth in *White-Smith Music Publishing Co. v. Apollo Co.*³⁸

The making of visual records, such as microfilm, for a storage system involves different considerations from those in making a punched card or a magnetic tape. It has been held that using a different medium of expression to copy the substance of a copyrighted work will not avoid infringement.³⁹ Specifically, courts have held it an infringement to make a leather relief⁴⁰ or a sketch⁴¹ of a copyrighted photograph. By the same token, a photograph of a copyrighted piece of sculpture⁴² and a photograph of an engraving⁴³ have each been held to be infringements.

Clearly, a photograph of a copyrighted piece of literature would be a "copy" within the meaning of the statute.⁴⁴ And even though a microfilm of a printed work would be extremely small by its very nature, it would probably be free of the "lack of intelligible notation" objection upon which *White-Smith Music Publishing Co. v. Apollo Co.*⁴⁵ is based. Moreover, it is to be noted that the Copyright Office has chosen to grant copyrights to microfilms which cannot be used by the unaided eye.⁴⁶

In summary with respect to inputs of literature into a storage system, those inputs which are in intelligible systems of notation, e.g., microfilm and data cards which are both punched and printed, are probably "copies" and will constitute an infringement of copyright unless they come within the doctrine of fair use. On the other hand,

magnetic tape recording. Note, "Copyright Protection for Computer Programs," *Columbia Law Review*, Vol. 64 (1964), pp. 1274, 1277 n. 9.

³⁷ *Capitol Records, Inc. v. Mercury Records Corp.*, 221 F.2d 657, 105 USPQ 163 (2d Cir. 1955); *Corcoran v. Montgomery Ward & Co., Inc.*, 121 F.2d 572, 50 USPQ 274 (9th Cir. 1941) (dictum), *cert. denied*, 314 U.S. 687, 51 USPQ 546.

³⁸ 209 U.S. 1 (1908).

³⁹ *Fleischer Studio, Inc. v. Ralph A. Freundlich, Inc.*, 73 F.2d 276, 23 USPQ 295 (2d Cir. 1934); *King Features Syndicate v. Fleischer*, 299 F. 533 (2d Cir. 1924).

⁴⁰ *Falk v. T. P. Howell Co.*, 37 F. 202 (C.C.S.D.N.Y. 1880).

⁴¹ *Lumiere v. Pathé Exch. Inc.*, 275 F. 428 (2d Cir. 1921) (dictum).

⁴² *Bracken v. Rosenthal*, 151 F. 136 (C.C.N.D. Ill. 1907); *But see, Mura v. Columbia Broadcasting System, Inc.*, 245 F. Supp. 587, 147 USPQ 38 (S.D.N.Y. 1964).

⁴³ *Rossiter v. Hall*, 20 F. Cas. 1253 (No. 12,082) (C.C.E.D.N.Y. 1866).

⁴⁴ 17 U.S.C. § 1(a) (1964).

⁴⁵ 209 U.S. 1, 17 (1908).

⁴⁶ 37 C.F.R. § 202.2(b) (8) (1960).

"unintelligible inputs," e.g., punched cards and magnetic tape, are probably not "copies" and are not infringements unless such can be sustained as "translations" into a language coherent to a computing machine.⁴⁷

Search and Recall Within a Storage System

Once literary information is stored within a system, the method by which an output is selected is that of search and recall. Searching the memory of a computer, or other system, involves scanning the various storage cells and comparing the index codes of stored material with the index codes of material which it is desired to recall from the memory. The various electronic and optical manipulations involved in searching are clearly too transient and flighty even to consider them as possibly being "copies" of a literary work.⁴⁸ To do so would be to make infringement largely a question of physics rather than copyright law, and undoubtedly such was not within the intention of Congress.⁴⁹

Output of Literature from a Storage System

Ephemeral Means of Reproduction

The output of a mechanized storage system presents the most fertile possibilities of copyright infringement, since it is there that a visually perceivable "copy" of the work generally must appear in order to be of some value to the ultimate user. Assuming that the nature of the stored material could comprise a copy, e.g., verbatim text of the copyrighted work, a printout or a photostat of the text would clearly constitute a copy. Problems begin to arise, however, when we consider, as "copies," such ephemeral means of reproduction of text as projection of a microfilm on a screen or a display of characters on a cathode ray tube.⁵⁰

⁴⁷ 17 U.S.C. § 1(b) (1964); See note 22 *supra* and accompanying text.

⁴⁸ See the definition of "'fixed' in a tangible medium of expression" given in H.R. 2512, 90th Cong., 1st Sess. § 101 and discussed in H.R. Rep. No. 83, 90th Cong., 1st Sess. 16 (1967).

⁴⁹ The argument that scanning a literary work in a computer's memory is analogous to a "performance" of a dramatic work is made in a Supplemental Statement on H.R. 4347 Submitted by Bella Linden in Behalf of the American Textbook Publishers Association, Hearings on H.R. 4347 before Subcommittee No. 3 of the House Comm. on the Judiciary, 89th Cong., 1st Sess. 1455, 1456 (1965).

⁵⁰ See, e.g., P. Dickson, "Latest Word in Printing Spells New Electronic Market," *Electronics*, Vol. 40 (1967), p. 137; United States Patent No. 3,313,883.

In *Tiffany Productions, Inc. v. Dewing*⁵¹ the Maryland District Court adopted the rule that the projection of a motion picture *photoplay* on a screen was not a "copy" of the film but was a "performance"⁵² of a dramatic work.⁵³ The court seemed to reason that since a display of a motion picture based upon a novel was a dramatization of the novel,⁵⁴ the display was therefore the performance of a dramatic work. It was recognized that the holding in *Tiffany* created somewhat of an anomaly in the law by bringing the exhibition of photoplays within the statute but leaving the display of nondramatic film unprotected; and the court commented that:

The fact that the construction here adopted excludes motion pictures other than photoplays, and thereby gives the latter protection denied to the former, may produce an undesirable or even inequitable result.⁵⁵

The seemingly inequitable result springing from *Tiffany* was recognized and corrected by the Second Circuit Court of Appeals six years later in *Patterson v. Century Productions, Inc.*⁵⁶ when it held that the projected image of a documentary motion picture was a copy thereof. Although the holding in *Patterson* has been criticized,⁵⁷ particularly as it would affect the use of videotape,⁵⁸ its application to the projected reproduction of printed material would seem to be sound. In *Mura v. Columbia Broadcasting System, Inc.*⁵⁹ a New York court held, in the face of *Patterson*, that neither a kinescopic recording⁶⁰

⁵¹ 50 F.2d 911, 9 USPQ 545 (D. Md. 1931).

⁵² The owner of copyright is guaranteed the right "To perform or represent the copyrighted work publicly if it be...a dramatic work..." 17 U.S.C. § 1(d) (1964).

⁵³ There is room for argument that the court in *Tiffany* did not actually hold that a projected image was not a "copy," based upon the language at p. 914 of the opinion:

[A]ssuming, without deciding, that the exhibition here complained of was neither a 'publication' nor a 'copy' within the meaning of section 1 (a) of the act, there would seem to be no escape from the conclusion that the plaintiffs are nevertheless entitled to invoke the protection of section 1 (d) on the ground that a 'motion picture photo-play' is a 'dramatic work.' (Emphasis added.)

⁵⁴ *Kalem Co. v. Harper Brothers*, 222 U.S. 55 (1911).

⁵⁵ 50 F.2d at 915, 9 USPQ at 548.

⁵⁶ 93 F.2d 489, 35 USPQ 471 (2nd Cir. 1937), cert. denied, 303 U.S. 655, 37 USPQ 844 (1938).

⁵⁷ See e.g., *Supplementary Report of the Register of Copyrights on the General Revision of the U.S. Copyright Law: 1965 Revision Bill*, 89th Cong., 1st Sess. 20 (Comm. Print 1965); H.R. Rep. No. 83, 90th Cong., 1st Sess. 16 (1967).

⁵⁸ Fritch, *op cit. supra* note 33; Meagher, *op. cit. supra* note 34 pp. 1081, 1096-1097.

⁵⁹ 245 F. Supp. 587, 147 USPQ 38 (S.D.N.Y. 1965).

⁶⁰ A kinescopic recording is a type of motion picture commonly used by the

nor a display on a television screen of a copyrighted hand puppet was a copy of the puppet. The reasoning in *Mura* was that the display and the recorded image were "so different in nature" from the copyrighted hand puppet that they would not "give to every person seeing it the idea created by the original."⁶¹ Aside from the fact that the basis for the decision in *Mura* is questionable in the light of prior cases,⁶² *Mura* should not be extended to include the reproduction of textual material on a display screen or a cathode ray tube. In the display of textual matter, the "nature" of the reproduction is the same as that of the original work; it should be immaterial that the words appear "printed" on a screen, rather than on a sheet of paper.

As applied to literature storage and retrieval devices, the rule of *Patterson* should continue to apply to ephemeral means of reproduction. An optical display of textual material is capable of serving the identical function of "hard copy" with respect to readability and other attributes of printed matter. Such displays should not be allowed to freely encroach upon the rights inherent in the copyright of a textual work. In general, any output from a storage system which is capable of visual perception, whether it is "hard copy" or visual display, should be a copy of the underlying work within the meaning of the statute.⁶³

Infringement by Transcriptions or Records

A copyright owner is given the exclusive right "to make or procure the making of any transcription or record thereof by or from which, in whole or in part, it may in any manner or by any method be exhibited, delivered, presented, produced or reproduced. . . ."⁶⁴ The question arises as to whether any of these rights are violated by acts involving the input, storage or output of a literature storage system. If read literally, the section would seem to include all the acts of input for storage within a computer. Clearly the making of a magnetic tape or a set of punched cards would come within the "making of any transcription or record" from which the copyrighted work might be reproduced.

television industry, before the advent of videotape, to record transmissions.

⁶¹ *Mura v. Columbia Broadcasting System, Inc.*, 245 F. Supp. 587, 589, 147 USPQ 38, 40 (S.D.N.Y. 1965), quoting with approval from, *West v. Francis*, 5 Barn. & Ald. 737, 743, 106 Eng. Rep. 1361, 1363 (K.B. 1822).

⁶² See notes 39-43 *supra* and accompanying text; *Patterson v. Century Productions, Inc.*, 93 F. Supp. 489, 35 USPQ 471 (2nd Cir. 1937).

⁶³ 17 U.S.C. § 1(a) (1964).

⁶⁴ 17 U.S.C. § 1(c) (1964).

It is to be noted that section 1(c) of the statute has been construed by some to apply only to situations where the transcript or record is of a "public performance" of the copyrighted work.⁶⁵ However, others have argued that the protection of copyrighted literature from storage within a computer system was one of the intentions of Congress when section 1(c) of the statute was enacted.⁶⁶ If the public performance concept is accepted, it would be a difficult task indeed to argue that the use of copyrighted literature within a storage system is a "performance" in the same sense as a dramatic production.⁶⁷

Fair Use

Fair use is a nonstatutory doctrine which says that under certain circumstances a reasonable amount of copying or reproduction of a copyrighted work is "fair use" of the work and not an infringement of copyright.⁶⁸ A determination of fair use relates basically to the nature of the copies made (e.g., abstract, synopsis or verbatim text) and the manner in which the copies are used (e.g., educational uses or scholarly writing). Assuming that one or more of the acts associated with the computer storage of copyrighted literature constitutes a "copying" of that literature, the next question is whether the making of that copy is within the doctrine of "fair use."

⁶⁵ See H.R. Rep. No. 1160, 82nd Cong., 1st Sess. 1 (1951). The Committee on Copyright of the Association of the Bar of the City of New York has interpreted section 1(c) as applying only to public performance rights. B. Linden, "Law and Computers in the Mid-Sixties," reprinted in Hearings on H.R. 4347 before Subcomm. No. 3 of the House Comm. on the Judiciary, 89th Cong., 1st Sess. 1421, 1422 (1965).

⁶⁶ John Schulman, one of the drafters of the 1952 amendment to the copyright statute, is of the opinion that in 1909 Congress intended to overrule *White-Smith Music Publishing Co. v. Apollo Co.* as to musical compositions because that was all that was apparent and in 1952 the intent was to bring all other forms out from under *White-Smith*. At the Philadelphia meeting of the American and Philadelphia Patent Law Associations on April 16, 1964, Mr. Schulman said, "I worded the act carefully to cover all these new developments." A transcript of the meeting is available at the A.P.L.A. office, 802 National Press Bldg., Washington, D. C. 20004.

⁶⁷ But see note 49 *supra*.

⁶⁸ *Folsom v. Marsh*, 9 F. Cas. 342 (No. 4901) (C.C.D. Mass. 1841); A. Latman, *Howell's Copyright Law*, rev. ed. (1962); U.S. Copyright Office, "Fair Use of Copyrighted Works" (*Information Lit. Bull.* No. 20, 1953); A. Bishop, "Fair Use of Copyrighted Books," *Houston Law Review*, Vol. 2 (1964), p. 206. For an excellent treatment of the history and development of the doctrine of fair use see L. Yankwich, "What Is Fair Use?" *University of Chicago Law Review*, Vol. 22 (1954), p. 203.

Educational and Scholarly Uses

The courts seem to have been more liberal with the application of fair use when dealing with scholarly rather than profit motives,⁶⁹ and some groups feel that any use for a scholarly or educational purpose should fall within fair use.⁷⁰ Judge Yankwich set forth the following criteria for determining fair use:

If the amount reproduced is legitimately necessary to review the book, or is a part of a scientific or other exposition of the subject, in which the theories expounded by others must be discussed, the use, *regardless of quantity*, is fair. If, on the other hand, the appropriation of the copyrighted product of another is motivated by the desire to derive commercial benefit, the use, *regardless of quantity*, is unfair.⁷¹

Judge Yankwich's thesis regarding the commercial usage of copyrighted material seems to be supported by the decision in *Henry Holt & Co., Inc. v. Liggett & Myers Tobacco Co.*⁷² There the court found that the defendant's use in an advertisement of only three sentences of a copyrighted scientific book was an infringement. On the other hand, it has been held that the commercial use in a magazine of eight lines of a song's chorus was "relatively unimportant" and hence a fair use of the copyrighted song.⁷³ Despite the apparent split on the significance of commercial usage in determining fair use, the principle remains that copying all, or substantially all, of a copyrighted work may never constitute fair use, even if for an educational purpose.⁷⁴ Further, it has been held that a synopsis version of a work is not within the doctrine of fair use even if made by a teacher for purely educational use with a limited number of his students.⁷⁵

One commercial use to which literature storage and retrieval systems are particularly adaptable is that of preparing and searching compilations and lists. The extent to which a compiler may rely on previously copyrighted lists has been in some dispute. Some courts

⁶⁹ *Greenbie v. Noble*, 151 F. Supp. 45, 113 USPQ 115 (S.D.N.Y. 1957); *Thompson v. Gernsback*, 94 F. Supp. 453, 87 USPQ 238 (S.D.N.Y. 1950).

⁷⁰ See, e.g., Statement by Harold E. Wigren for Ad Hoc Committee (of Educational Institutions and Organizations) on Copyright Law Revision, Hearings on H.R. 4347 before Subcomm. No. 3 of the House Comm. on the Judiciary, 89th Cong., 1st Sess. 317 (1965).

⁷¹ Yankwich, *op. cit. supra* note 68, p. 209.

⁷² 23 F. Supp. 302, 37 USPQ 449 (E.D. Pa. 1938).

⁷³ *Karll v. Curtis Publishing Co.*, 39 F. Supp. 836, 51 USPQ 50 (E.D. Wis. 1941).

⁷⁴ *Wihtol v. Crow*, 309 F.2d 777, 135 USPQ 385 (8th Cir. 1962), *reversing*, 199 F. Supp. 682, 132 USPQ 392 (S.D. Iowa 1961); See J. Cooper, "Wihtol v. Crow: Fair Use Revisited," *U.C.L.A. Law Review*, Vol. 11 (1963), p. 56.

⁷⁵ *Macmillan Co. v. King*, 223 F. 862 (D. Mass. 1914).

have held that a second author may use a previous work to check his work for accuracy⁷⁶ while others have refused to allow such a use.⁷⁷ At least one other court has attempted to rationalize these conflicting decisions,⁷⁸ but with little success, and the precedent in this area remains as cloudy as ever.

Another growing field for literature storage and retrieval systems is that of computerized legal research. Synopsized versions of cases are stored in the memory of a machine and upon a query from an operator, all cases having a desired set of facts or embodying a certain principle of law are printed out. In regard to the storage of material within a memory, it was held in 1894 that one preparing a legal digest could not use copyrighted case headnotes in any way to "lighten his labors" except to check his work for accuracy.⁷⁹ More recently, the Attorney General of the State of New York expressed an opinion⁸⁰ that the use of copyrighted statements of fact, headnotes, et cetera, from state court opinions in a computer for legal research would be an infringement of New York's copyright.

Under existing copyright law, a statement made by Justice Storey over 100 years ago is probably just as applicable to the fair usage of copyrighted material as any that could be made today. In *Folsom v. Marsh*,⁸¹ Justice Storey said that one must:

[L]ook to the nature and objects of the selections made; the quantity and value of the material used and the degree in which the use may prejudice the sale or diminish the profits or supersede the objects, or the original work.⁸²

There must be a balancing of interests between those who would suffer from the free use of all copyrighted material and those who would suffer from an absolute prohibition on copying. The fact that a computer storage system is being used for or is doing the copying, rather than a photocopy or mimeograph machine, should have no effect on the application of the traditional principles of fair use.

⁷⁶ *E.g.*, *List Publishing Co. v. Keller*, 30 F. 772 (C.C.S.D.N.Y. 1887).

⁷⁷ *E.g.*, *Sampson & Murdock v. Seaver-Radford Co.*, 140 F. 539 (1st. Cir. 1905).

⁷⁸ *Jeweler's Circular Publishing Co. v. Keystone Publishing Co.*, 281 F. 83 (2nd Cir. 1922), *cert. denied*, 259 U.S. 581.

⁷⁹ *West Publishing Co. v. Lawyer's Co-op Publishing Co.*, 64 F. 360 (C.C.N.D.N.Y. 1894), *rev'd on other grounds*, 79 F. 756 (2nd Cir. 1897); *see notes 76-78 supra* and accompanying text.

⁸⁰ Opinion of the Attorney General of the State of New York, 142 *USPQ* 288 (1964).

⁸¹ 9 F. Cas. 342 (No. 4901) (C.C.D. Mass. 1841).

⁸² *Id.* at p. 348.

THE PROBLEM UNDER THE PROPOSED COPYRIGHT LAW REVISION

Since 1955 study has been underway and directed toward a general revision of United States Copyright Law which will reflect the suggestions and needs of a wide variety of interested groups.⁸³ Under the latest proposed bills⁸⁴ for the revision of the copyright law, the situation with respect to literature storage and retrieval systems is much clearer than under the existing statute.

Concept of Copying

Under the proposed bill, a copyright owner is given the exclusive right "to reproduce the copyrighted work in copies. . . ."⁸⁵ The term "copies" is defined as:

[M]aterial objects . . . in which a work is *fixed* by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.⁸⁶
[Emphasis added.]

The bill further states that "A work is 'fixed' in a tangible medium of expression when its embodiment in a copy . . . is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory nature."⁸⁷ One of the purposes of the committee in formulating the concept of fixation was to exclude from being either copies or copyrightable, "purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the 'memory' of a computer."⁸⁸

While the new definition of "copies" will abolish the holding of *Patterson v. Century Productions, Inc.*,⁸⁹ that an image projected on a

⁸³ See *Report of the Register of Copyrights on the General Revision of the U.S. Copyright Law*, to the House Comm. on the Judiciary, 87th Cong., 1st Sess. IX-XI (Comm. Print 1961).

⁸⁴ S. 597, H.R. 2512, 90th Cong., 1st Sess. (1967) [hereinafter cited as Copyright Bill]; See *USPQ*, Feb. 6, 1967, pp. III-IV. H.R. 2512 passed the House of Representatives on April 11, 1967, 113 Cong. Rec. 3888 (daily ed. April 11, 1967).

⁸⁵ Copyright Bill § 106(1).

⁸⁶ *Id.* § 101.

⁸⁷ *Id.*

⁸⁸ H.R. Rep. No. 83, 90th Cong., 1st Sess. 16 (1967) [hereinafter cited as Committee Report].

⁸⁹ 93 F. Supp. 489, 35 *USPQ* 471 (2nd Cir. 1937), *cert. denied*, 303 U.S. 655, 37 *USPQ* 844 (1938). See note 56 *supra* and accompanying text.

screen is a copy,⁹⁰ it will also finally do away with the last vestiges of *White-Smith Music Publishing Co. v. Apollo Co.*⁹¹ which held that a punched paper "piano roll" was not a copy of a printed musical score. The committee appreciated that the distinctions drawn in *Apollo* were largely artificial and were definitely not in keeping with the technological progress that has been made in the last half-century.⁹² Specifically, the committee noted that:

Under the bill it makes no difference what the form, manner, or medium of fixation may be—whether it is in words, numbers, . . . or any other graphic or symbolic indicia, whether embodied in a physical object in written, printed, . . . punched, magnetic, or any other stable form, and whether it is capable of perception directly or by means of any machine or device 'now known or later developed.'"⁹³

As is apparent from the committee report, the bill is very wisely couched in language which does not attempt to anticipate the development of reproduction technology by providing protection against specific kinds of copying. Instead, the provisions are "broad enough to allow for adjustment to future changes in patterns of reproduction and other uses of author's works."⁹⁴ Hopefully, the copying provisions of the new statute can remain just as modern as the technology with which they must deal and thereby avoid the future creation of another *White-Smith Music Publishing Co. v. Apollo Co.*⁹⁵

Concept of Display

The proposed bill gives a copyright owner the exclusive right "in the case of literary . . . works, to display the copyrighted work publicly."⁹⁶ The bill defines "display" as meaning "to show a copy of it, either directly or by means of a film, slide, television image, or any other device or process. . . ."⁹⁷ The bill goes on to state that "To . . . display a work 'publicly'" means:

(1) to perform or display it at a place open to the public or at

⁹⁰ Although projected images will no longer be copies under the bill, they may come under the protection given to "public displays." See note 99 *infra* and accompanying text.

⁹¹ 209 U.S. 1 (1908). See note 24 *supra* and accompanying text.

⁹² Committee Report 15 (1967).

⁹³ *Id.*

⁹⁴ *Id.* at 24.

⁹⁵ 209 U.S. 1 (1908).

⁹⁶ Copyright Bill § 106 (5).

⁹⁷ *Id.* § 101.

any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered. . . .⁹⁸

The committee was careful in reporting the bill to draw a distinction between the rights of reproduction and display, pointing out that while transitory images might not be stable enough to be "fixed" as copies of a work they may very well be displays.⁹⁹ More specifically, it is the intention of the committee that a display would:

. . . include the projection of an image on a screen or other surface by any method, the transmission of an image by electronic or other means, and the showing of an image on a cathode ray tube or similar viewing apparatus connected with any sort of information storage and retrieval system.¹⁰⁰

The language of the bill, in the light of the committee's report, would seem technically to cover all instances of computer display of copyrighted literary works. However, a problem that might arise is in the fact that the bill's coverage is limited to "public displays" and the corresponding definition of "public." The report points out that no provision of the bill "would make a purely private display of a work a copyright infringement."¹⁰¹ Further, it is pointed out "that most routine meetings would be excluded because they do not represent the gathering of a 'substantial number of persons.'"¹⁰² Under such a "public" display provision it seems that the most common use of a literature display device would not be an infringement, i.e., the use of a private display console by a single reader or a small group of persons. While there is clearly good reason for excluding a private display of dramatic and like works from coverage by the bill, the exclusion as to literary works seems to be inconsistent with the other provisions of the bill which provide a sound framework for protection against copying by literature storage and retrieval systems.

An additional provision of the bill which may affect the display of literary works by storage and retrieval devices is that:

. . . the owner of a particular copy . . . is entitled . . . to display that copy publicly, either directly or by the projection of no more than one image at a time, to viewers at the place where the copy is located.¹⁰³

Under this section, it would be an infringement for a computer to

⁹⁸ *Id.*

⁹⁹ Committee Report 24.

¹⁰⁰ *Id.* at 28.

¹⁰¹ *Id.* at 27.

¹⁰² *Id.* at 28.

¹⁰³ Copyright Bill § 109(b).

transmit an image of a copyrighted work to a remote location and there display it to members of the public. Also, it would be an infringement for a copyowner to create images of a copyrighted work at more than one display console at the same time.¹⁰⁴

The composite effect of the "reproduction in copies"¹⁰⁵ and "public display"¹⁰⁶ provisions of the proposed bill on literature storage and retrieval systems is to grant a great deal more protection to owners of copyrights than exists under the present law. The committee felt generally that the bill "preserves the exclusive rights of the copyright owner with respect to reproductions of his work for input or storage in an information system."¹⁰⁷ More specifically, the committee reported that:

[T]he following uses could be infringements of copyright under section 106: reproduction of a work (or a substantial part of it) in any tangible form (paper, punch cards, magnetic tape, etc.) for input into an information storage and retrieval system; reproduction of a work or substantial parts of it, in copies as the "print out" or output of the computer; preparation for input of an index or abstract of the work so complete and detailed that it would be considered a "derivative work;" computer transmission or display of a visual image of a work to one or more members of the public. On the other hand, since the mere scanning or manipulation of the contents of a work within the system would not involve a reproduction, the preparation of a derivative work, or a public distribution, performance, or display, it would be outside the scope of the legislation.¹⁰⁸

Generally, it can be seen that the latest bill for the revision of the copyright law considers and appears to settle the question of infringement by information storage and retrieval systems. Moreover, an intent to keep the law up to date is noted in the words of the bill's definition of "copies," "any method now known or later developed."¹⁰⁹ Hopefully, this language, and other provisions like it, will allow the copyright law to grow and expand with technology as the law in other areas has so often failed to do.

Fair Use

Under the proposed bill, the judicial doctrine of fair use will be codified. The bill provides that:

¹⁰⁴ Committee Report 39.

¹⁰⁵ Copyright Bill § 106 (1).

¹⁰⁶ *Id.* § 106 (4).

¹⁰⁷ Committee Report 25.

¹⁰⁸ *Id.*

¹⁰⁹ Copyright Bill § 101.

In determining whether the use made of a work in any particular case is a fair use, the factors to be considered shall include:

- (1) the purpose and character of the use;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.¹¹⁰

Within the framework of the four criteria, the committee intended that the principles of fair use extend to "all stages in the operations of information storage and retrieval systems, including input, and output in the form of visual images or hard copies."¹¹¹ Input functions involving the reproduction of small excerpts or key words and output operations such as the printing of bibliographical lists and short summaries are recited as examples of possible fair use.¹¹²

With respect to the purposes of a particular use of a copyrighted work: although the bill points out that teaching, scholarship and research are particularly brought within the doctrine of fair use,¹¹³ the comments of the committee fail to answer a question presented by the term "research." Is "research" meant to be a nonprofit, university-type activity or does it also include what will possibly be the largest single user of literature storage and retrieval systems, organized industrial research and development? Presumably, the profit-orientated element of the latter activity will exclude it from the "purpose" exemption of fair use.¹¹⁴

An additional section of the bill will grant an exemption for certain teaching activities. It is provided that a "display of a work by instructors or pupils in the course of face-to-face teaching activities of a nonprofit educational institution, in a classroom or similar place devoted to instruction" is not an infringement of copyright.¹¹⁵ This would seem to exempt the use of copyrighted works in computerized methods of instruction, a potentially large use of literature storage and retrieval devices.¹¹⁶

Generally, the fair use provision in the proposed bill "is intended to restate the present judicial doctrine of fair use, not to change, narrow,

¹¹⁰ Copyright Bill § 107.

¹¹¹ Committee Report 35-36.

¹¹² *Id.*

¹¹³ Copyright Bill § 107.

¹¹⁴ Committee Report 33.

¹¹⁵ Copyright Bill § 110(1).

¹¹⁶ See, e.g. Melloan, "Selling to Schools: Big Educational Outlays, New Teaching Methods Create a Vast Market," *Wall Street Journal* (May 3, 1965), p. 1.

or enlarge it in any way.”¹¹⁷ Under the bill, the principles of fair use should embody the same equitable rules of reason whether a copy or display is made by a computer or by some much less sophisticated technique. The same equitable principles considered by Justice Storey in *Folsom v. Marsh*¹¹⁸ should be applied and, through a balancing of the interests involved, a decision rendered on the particular facts of the case.

CONCLUSION

Under the existing copyright statute, the only input and output functions of a literature storage and retrieval system which do not appear to be infringements of copyright are those which are not in “intelligible systems of notation.” This anomaly is due to a classic example of a difficult case making bad law. The decision in *White-Smith Music Publishing Co. v. Apollo Co.* appears to have frozen the law in this particular area and disabled it from developing along with the technology with which it must deal.

On the other hand, the latest bill for the revision of the copyright law provides protection for the copyright owner against exploitation by users of literature storage and retrieval devices. While it can be appreciated that some of the provisions of the new bill may restrict the development and application of new computer uses, the public interest is probably best served by continuing to protect the individual author. The small price that users of literature storage and retrieval systems may have to pay is far outweighed by the benefit to the public at large which results from a continued encouragement and reward of individual creativity.

¹¹⁷ Committee Report 32.

¹¹⁸ 9 F. Cas. 342 (No. 4901) (C.C.D. Mass. 1841); see text accompanying note 81 *supra*.

The Constitutionality of the First-to-File System

ROBERT M. DAVIDSON*

SUMMARY

THE CONSTITUTIONALITY OF THE FIRST-TO-FILE SYSTEM is examined by tracing the traditional concept of "true and first inventorship" from its inception in England to its influence on the meaning of "inventor" in the U.S. Constitution. Although the establishment of a first-to-file system would be contrary to Anglo-American legal concepts, the author believes that the breadth of Congress' power to promote the useful arts is sufficient to encompass such an innovation.

INTRODUCTION

IN THE RECENT *Report of the President's Commission on the*

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Patent System,¹ that body designated as its first and most important recommendation, the granting of a patent to the first applicant regardless of a prior conception or reduction to practice by another. Their recommendation went as follows:²

. . . (a) when two or more persons separately apply for a patent on the same invention, the patent would issue to the one who is FIRST TO FILE his application; . . .

The Commission added,

In a first-to-file system, the respective dates of 'conception' and 'reduction to practice' of the invention, presently of great importance in resolving contested priority for an invention claimed in two or more pending applications or patents, no longer would be considered. Instead, the earliest effective filing date would determine the question of priority. This necessarily follows from the provision that the disclosure in a patent or published complete application shall constitute prior art as of its effective filing date. Interference proceedings thus would be abolished.³

Although the covering letter transmitting the Commission's report to the President made reference to background material which would take into account in depth the considerations from which the recommendations flowed,⁴ no such background material has been made generally available to the public.

Inasmuch as the first-to-file recommendation represents a radical departure from traditional legal concepts, it is particularly important that the Commission's background on this point be made public. The need for such data was heightened as The Patent Reform Act of 1967,⁵ which adopts the first-to-file concept has already been introduced into Congress. It is hoped, that, due to the paucity of administratively developed background on first to file, thoughtful observers will, in the near future, turn their attention to both the legal and economic implications of this recommendation. The purpose of this short paper is to investigate the Constitutionality of first to file, which is an issue that merited discussion in the Commission's report.

HISTORY OF "TRUE AND FIRST" INVENTORSHIP

Article I, Section 8 of the Constitution includes among the enu-

¹ U. S. Government Printing Office, Washington, D. C. (1966).

² *Id.* at p. 5.

³ *Id.* at p. 5.

⁴ *Id.* at p. ii.

⁵ S. 1042 and H.R. 5924.

merated powers, the power of Congress,

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;

This provision which has been and still is the basis for all laws dealing with patents and copyrights is of central importance in this investigation. The constitutional provision was the combined product of Charles Pickney and James Madison⁶ both of whom came from states which had patent laws patterned after the English practice.

In the colonies, as in England, patents were looked upon as an exception to a more general policy against the granting of private monopolies. An example of this feeling is illustrated in the response Thomas Jefferson, often called "the father of our patent system," gave to James Madison after Jefferson reviewed a draft of the Constitution. He said,

I sincerely rejoice at the acceptance of the new Constitution by nine states. It is a good canvas, on which some strokes only want retouching. What these are, I think are sufficiently manifested by the general voice from north to south which calls for a bill of rights. It seems pretty generally understood that this should go to *** monopolies. *** The saying there shall be no monopolies, lessens the incitements to ingenuity, which is spurred on by the hope of a monopoly for a limited time, as of 14 years; but the benefit of even limited monopolies is too doubtful to be opposed to that of their general suppression.⁷

The view that patents are limited monopolies with the emphasis on limited has persisted to this day. It is not surprising then that jurists are often found placing limitations and exceptions on the patent grant; some of which do not appear in our Constitution. If it is possible from Article I, Section 8 to find a "constitutional standard of invention,"⁸ and apply it to limit the scope of patent grants, it would not be surprising that a similar limitation could be found as to whom the limited monopoly should be granted.

The Constitution uses the term "inventors" as the person entitled to the exclusive grant. A review of the meaning of the word at common law will be helpful in determining its intended meaning in the Constitution.

⁶ K. Fenning, "The Origin of the Patent and Copyright Clause in the Constitution," *Georgetown Law Journal*, Vol. 17 (February 1929), p. 109.

⁷ *The Writings of Thomas Jefferson*, Vol. 5, Paul L. Ford, ed. New York: G. P. Putnam's Sons. 1895, p. 113.

⁸ 41 JPOS 389.

The common law of patents for inventions extends far back into the 15th and 16th centuries in England. It was explained and codified in the *Case on Monopolies*⁹ and the *Statute of Monopolies*.¹⁰ In the former, the Exchequer Chamber held that the royal grant of an exclusive privilege for the sole making and merchandizing of playing cards within the realm and the sole importation thereof was an illegal monopoly.

Arguing against the grant, Fuller, counsel for the defendant is quoted as saying:

Now therefore I will show you how the Judges have heretofore allowed of monopoly patents which is that where any man by his own charge and industry or by his own wit or invention doth bring any new trade into the Realm or any Engine tending to the furtherance of a trade that never was used before and that for the good of the Realm; that in such cases the King may grant to him a monopoly patent for some reasonable time, until the subjects may learn the same, in consideration of the good that he doth bring by his Invention to the Commonwealth; otherwise not.

To support his position that these were the only valid monopolies at law, Fuller cited three cases in which, after the monopoly was granted, the invention was found not to have been novel as to the alleged inventor. The last case cited by Fuller was a patent to Humphrey of the Tower, in which the Court of Exchequer held that if Humphrey was not the *first* and *true* inventor, he was not entitled to a limited monopoly. (Emphasis added.) Though the arguments of Fuller have been erroneously credited to the Court by some reporters¹¹ they have nevertheless been often repeated as basic tenets of the common law of patents.¹²

The Statute of Monopolies, like the *Case of Monopolies* was an attempt to put an end to the granting of monopolies which were illegal at common law, but which were still being granted by the Crown. A proviso in the Statute allowed for the granting of future letters patent for inventions. Because of its importance in the common law that portion is reprinted in full as follows:

VI. Provided also, and be it declared and enacted: that any declaration before mentioned shall not extend to any letters-patent and grants of privilege, for the term of fourteen years or under, hereafter to be made, of the sole working or making of any manner of new manufactures, within this realm, to be the true and first inventor and inventors of such manufactures, which others, at the

⁹ *Darcy v. Allein*, Noy 173; 11 Coke R. 84-b; Web. Pat. Cases I, (1602).

¹⁰ 21 Jac. 1, Ch. 3 (1624).

¹¹ See for example, Webster's Account, Web. Pat. Cases 1.

¹² Fox, *Monopolies and Patents*, (Toronto: University of Toronto Press, 1947).

time of making such letters-patent and grant, shall not use, so as also they be not contrary to the law, nor mischievous to the state, by raising prices of commodities at home, or hurt of trade, or generally inconvenient: The said fourteen years to be accounted from the date of the first letters-patent or grant of such privilege, hereafter to be made; but that the same shall be of such force as they should be, if this act had never been made and of none other.¹³

These common law precedents quite clearly establish that a person was not entitled to a monopoly unless he was the *true* and *first* inventor.

Because the Statute of Monopolies was a codification of common law, and because it was only concerned with activities within the "Realm," it is to be expected that the term "true and first inventor" was applicable only to the "Realm." The case law both before and after the Statute of Monopolies fortifies this view. For example, in Hasting's Patent of 1567 for the making of frisadoes,¹⁴ the patentee was the first importer of the skill. In *Matthey's Case*,¹⁵ the patentee was also an importer. Similarly, in the famous *Cloth Workers of Ipswich Case*,¹⁶ the court regarded importers as the proper recipients of a patent grant. Following the Statute of Monopolies in *Edgebury v. Stephens*, the court declared,

. . . if the invention be new in England, a patent may be granted though the thing was practiced beyond sea before; for the statute speaks of new manufactures within this realm; so that if it be new here, it is within the statute; for the act intended to encourage new devices useful to the kingdom, and whether learned by travel or by study it is the same thing.¹⁷

It is clear, however, from *Minter v. Wells & Hart*,¹⁸ that at common law only the first importer was entitled to a patent.

The inclusion of "importers" as proper holders of patents can not be said to have reduced the dignity and force of the words "true" and "first," because, as the courts pointed out, those words were meant to apply only to acts within the realm.

A second doctrine which has a bearing upon the interpretation of the common law requirement of a "true and first inventor" is illustrated in *Dolland's Case*.¹⁹ In that case, Dolland was granted a patent for the manufacture of object glass in a telescope. Dolland later sued one,

¹³ 21 Jac. Ch. 3.

¹⁴ See Web. Pat Cases at p. 6.

¹⁵ *Id.* at p. 6.

¹⁶ Godbolt 252; 1 Abb. Pat. Cases 6. (1615).

¹⁷ Web. Pat. Cases, p. 35 (1691).

¹⁸ Web. Pat. Cases, p. 127 (1834).

¹⁹ Web. Pat. Cases, p. 42 (1758).

Cornhill, an instrument maker for infringing his patent. The defense alleged in the suit was that Dolland was not the true and first inventor inasmuch as one, Dr. Hall had made the discovery prior to Dolland. It was established by the plaintiff however that Dr. Hall had not applied for a patent grant and had kept the discovery secret. The court held that the secret use of the discovery by Dr. Hall was not such as to defeat the rights in *Dolland*.

It must be pointed out that this was not a case where rival parties were claiming or petitioning for patent rights. Thus, the issue was not, who, between two petitioners should be awarded the grant, but rather whether the secret use by Dr. Hall prior to the patenting by Dolland would act as a bar to Dolland's patent grant. The issue is put into a more proper prospective when it is realized that Dolland's patent was granted on April 19, 1758 and the suit occurred in February 1786, eight years later and at no time during that interval did Dr. Hall apply for a patent grant. Further, Dr. Hall was not a party to the infringement suit.

Consequently, the most *Dolland's Case* can be cited for is the proposition that it modified the word "first" to mean that a patent would not be invalidated in an infringement suit by the defendant's showing that prior to the plaintiff a third party had discovered and abandoned the invention.

The theory that an abandoned secret use would not vitiate a grant to a subsequent inventor was more fully explained in *Jones v. Pearce*.²⁰

The later case of *Cornish & Siever v. Keene & Nickels*²¹ seems to imply that where there are rival inventors, he who first applies for a patent should prevail. For in that case, the court said,

. . . because there may be many discoverers starting at the same time, many rivals that may be running on the same road at the same time, and the first which comes to the crown and takes out a patent, it not being generally known to the public, is the man who has a right to clothe himself with the authority of a patent, and enjoy its benefits.²²

But again, this was not a case between rival applicants, but rather the issue again was whether a prior secret use would in itself vitiate a patent grant. Hence the above language is dicta to our inquiry.

The real meaning of the Statute of Monopolies with respect to the issue at hand is best described by Michael when, he said, discussing the

²⁰ Web. Pat. Cases, p. 122 (1832).

²¹ Web. Pat. Cases, p. 501 (1835).

²² *Id.* at 508.

historical background of patents,

Another important feature of the first French law of 1791, is that the law was mainly to benefit the true inventor ("veritable inventeur"), which is in full agreement with the English Statutes of Monopolies. This must be emphasized particularly in view of the fact that it has been erroneously inferred under the provisions of some patent systems such as the German that the patent was to go not to the "true" and "first" inventor, but to the "applicant"; this doctrine being particularly widespread in Germany where a patent is granted to the first applicant, and where no examination is made as to whether or not the applicant is the actual inventor, due to the difficulty of proof. Such an inference, however, would denote a complete misunderstanding of the true principles of universal patent law. Patent law was originally based upon the idea that he who discloses the invention and claims protection for it is also the original inventor or his legal successor. While an inventor who does not disclose his invention is not entitled to any protection, a mere discloser who is not the inventor is even less entitled to it, provided always, of course, that the latter did not rightfully derive the title of the invention from the inventor. If it were otherwise, then there would be a premium upon the violation of secrets, upon the intrusion into the working conditions of others, upon espionage and fraud, which naturally cannot be the intent of the law. Patent systems, such as the German, which grant the patent to the applicant, can only arrive at this rule by assuming that the applicant is at the same time the true inventor.²³

It was within this common law background that the constitutional provision was written. The pre-existing common law is important in two respects; first, the common law affords a background for interpreting the constitutional clause, and second, it adds to the constitutional provision and statutes enacted thereunder whenever not inconsistent with verbally declared law. That the former is true can be demonstrated by the statements of the drafters who made reference to common law when describing Article I, Section 8 and by the Colonial statutes closely patterned after the common law Statute of Monopolies.²⁴ The second use of the common law is exemplified by the many citations to the Statute of Monopolies in the early American case law and in the writings of the early Supreme Court justices. For example, Justice Story's famous note on the patent laws stated,

The patent acts of the United States are, in a great degree founded on the principles and usages which have grown out of the English Statute (Statute of Monopolies) on the same subject.²⁵

²³ Michel, Aloys J., *Introduction to the Principal National Patent Systems*, Vol. I, Brooklyn, New York: Michel 1938. p. 16.

²⁴ 21 Jac. Ch. 3.

²⁵ 16 U.S. (3 Wheat) 655 (1818).

When using common law to interpret the phrasing of the Constitution a possible argument may arise contending that since the English Statute of Monopolies uses the words "true" and "first" to modify the word "inventor," that the word "inventor" must have had at common law a broad meaning, and since the Constitution does not modify the word "inventor" the Constitutional patent clause must authorize the granting of patents to persons other than first and true inventors. This argument however is a naive one which fails to distinguish between the legal concepts of common law on one hand and the meaning of words on the other. It assumes quite correctly that the clause should be interpreted within the common law limitations on monopoly grants. If that is the case, it surely is unreasonable to assume, especially in view of the well-documented and strong feeling in the Colonies against prerogatives and in particular monopolies, that the drafters of the Constitution meant to broaden the patent right by broadening the class of people to whom a patent could lawfully be granted.

Further, it is important to note that from the time of the Statute of Monopolies to the time of the Constitution, the meaning of the word "inventor" had evolved from "one that finds or finds out,"²⁶ to "one who produces something new; a deviser of something not known before."²⁷ The older meaning is not specific to a person who finds something new, but merely describes a finder, whereas the latter meaning is specific to a person who produces or creates something not previously in existence. The requirement of "produce" or "create" require originality and the requirement of "new" or "not known before" require priority in time. The most logical explanation for the change in meaning in the word "inventor" over the 163-year period is that the word had been made specific in meaning by its constant association with the modifiers "true" and "first" in the Statute of Monopolies.

Taking the word "inventor" in its meaning at the time of the Constitution, it was not necessary for the drafters to recite "true" and "first," to follow the common law definition of persons entitled to a limited monopoly as the word "inventor" contained those meanings by implication.

Further meaning can be given to the Constitution by tracing the early post-Constitution practice. The first Patent Act, the Act of 1790, made no provisions for interferences which would result when several different applications from different applicants claimed the same

²⁶ *Webster's 3rd International Dictionary*, (1964), p. 1188.

²⁷ 48 *JPOS* 13 (1966).

invention. Under that Act, conflicting claims were filed by John Fitch, James Rumsey, John Stephens, and Nathan Reed. The subject matters in dispute were steamboats and steam engines.

Hearings were held by the patent board, which included Thomas Jefferson, to settle the conflicting applications. A suggestion was made at the hearings that the conflict be settled by awarding patent rights to the first applicant. This suggestion was rejected.²⁸

Mr. P. J. Federico, a noted authority on the U. S. patent laws, and in particular their historical origin, commented on the steamboat application conflict stating, "It is very unlikely that duplicate patents were granted to the four steamboat claimants without deciding the question of priority."²⁹

Subsequent to the steamboat "interference," Representative Williamson collaborating with Jefferson introduced a patent bill which provided for a jury trial for interferences. Although that bill did not pass, a second bill introduced by Representative Williamson on December 10, 1792 did, and became known as the Patent Act of 1793. The third section of that act required the applicant to swear or affirm that he believed himself to be the true inventor. Section 9 provided for arbitration in interfering cases. The determination made in such arbitration was, who was the "true" and "first" inventor.³⁰

Following these two acts, in *Evans v. Eaton*,³¹ a case where the plaintiff was granted a patent by a private act of Congress and subsequently sued an infringer who defended on the grounds of prior knowledge and use, the court said regarding the lower court's interpretation of the 1793 Act,

The court misconstrued the law in their charge in this respect, inasmuch as the true construction of it (Section 3) is not that the patentee shall be the first and original discoverer of a patentable thing, but "the true inventor" of such a thing; that such a thing was truly discovered and patented without knowledge of its prior use, or public employment, or existence; more especially where as in the present instance the controversy is not between conflicting patents, but between the true patentee of a new and useful patentable thing and a person defending himself against an infringement, on the plea of its prior use by third persons who had no patent, and whose discovery, even if proved was a thing never in use or public existence, but in total disuse.³²

²⁸ 18 JPOS 248.

²⁹ *Id.*, p. 248.

³⁰ Robinson, *The Law of Patents and Useful Invention*, Vol. II. (Boston: Little Brown Co., 1890), p. 211. n. 2.

³¹ 16 U.S. (3 Wheat) 453 (1818).

³² *Id.* at 487.

Two important points need to be made with respect to *Evans v. Eaton*; first, that the facts are almost the duplicate of those in *Dolland's Case*, and the decision is the same, and second, that the Supreme Court carefully distinguished the facts in the case from the case of conflicting claimants as would be present in an interference.

It is interesting to note that Justice Cardozo, speaking for the Supreme Court in *Radio Corp. v. Radio Engineering Lab.*,³³ which was a contest of priority where the last to file was held to be the "first" inventor and therefore the one entitled to the patent, cited *Evans v. Eaton* for the proposition that, the prize of an exclusive patent falls to the one who had the fortune to be first.³⁴

Evidently Justice Cardozo took *Evans v. Eaton* to hold that priority must be determined in a contest among rival claimants.

The subsequent history of interference proceedings is well known to every patent practitioner and is summarized in *Allen, Commissioner v. United States ex rel Lowry*.³⁵

It seems clear from the above historical and evolutionary interpretation the constitutional provision with respect to inventors implicitly requires a "first" and "true" inventor.

THE ISSUE IN FOCUS

Suppose then that the Constitution is rewritten;

The Congress shall have the power; to promote the progress of useful arts, by securing for limited times . . . to true and first inventors the exclusive right to their discoveries.

The question arises as to whether the first-to-file system would be constitutional if the Constitution were interpreted as suggested. To answer this question one must first determine the test which the courts would apply and also the manner of their application.

When preferred constitutional rights are not involved, the test for unconstitutionality is quite high. There is a presumption of constitutionality³⁶ and the usual test is, did the legislature have a rational basis for enacting the particular legislation? To see what the rational basis must be directed to, the purpose of the patent laws must be ascertained.

³³ 293 U.S. 1, (1934).

³⁴ 293 U.S. 8, (1934).

³⁵ 26 App. D.C. 8; 1905 C.D. 643; 116 OG 2253.

³⁶ See cases collected under § 48 of Constitutional Law in *Federal Digest*.

In *Gill v. Wells*³⁷ the Supreme Court said,

The three ends intended to be accomplished by patent laws are knowledge by the government of what will become public property when the monopoly expires, instruction to licensed persons as to how to make and use the invention, information to other inventors as to what part of the field of invention is occupied.

Later in *Bauer v. O'Donnel*,³⁸ they stated,

The patent law was passed with a beneficent purpose of encouraging useful invention and promoting new and useful improvements by the protection and stimulation thereby given to inventive genius, and was intended to secure to the public, after the lapse of the exclusive privileges granted, the benefit of such inventions and improvements.

In *Motion Picture Patents*,³⁹ the statement was,

The primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is "to promote the progress of science and the useful arts."

and similarly in *Sinclair & C. Co. v. Interchemical Corp.*,⁴⁰

The primary purpose of the patent system is not reward of the individual, but the advancement of the arts and sciences.

From these pronouncements it can be seen that the overriding, "purpose and object of the patent laws is the," promotion of the arts and not reward of individuals.

In recommending a first-to-file system, the President's Commission on the Patent System noted,

Important considerations dictate this departure from our present practice. A first-to-file system will: encourage prompt disclosure of newly discovered technology; substitute for the delays and expense of interference proceedings a fair and inexpensive means by which an inventor can establish priority; and bring U. S. practice into harmony with that prevailing in almost all other industrial nations.⁴¹

All of these considerations relate to the promotion of the progress of the useful arts. If Congress found from the same considerations that it was necessary or rational to adopt a first-to-file system for the purpose of promoting the useful arts, it would be unreasonable to assume that the Supreme Court would thwart their goal which is also the constitu-

³⁷ 89 U.S. (22 Wall) 1 (1874).

³⁸ 229 U.S. 1, (1912).

³⁹ *Motion Picture Patents Co. v. Universal Film Mfg. Co. et al.*, 243 U.S. 502, (1917).

⁴⁰ 325 U.S. 327, (1944).

⁴¹ *Supra* note 1, p. 6.

tional goal by holding the legislation unconstitutional because of an implied meaning in the portion of the Constitution which is directed to the means of reaching the desired goal.

Especially since the Supreme Court has previously held that;

. . . The power(s) of Congress to legislate upon the subject of patents is plenary by the terms of the Constitution, *and as there are no restraints on its exercise, there can be no limitation of their right to modify them at their pleasure*, so that they do not take away the rights of property in existing patents.⁴²

To conclude, although the history and background of the present day interference proceedings whereby the law attempts to ferret out the “true” and “first” inventor in accordance with common law precedent establishes that the Constitution implicitly calls for a “true” and “first” inventor, the issue of first inventorship does not have a direct bearing upon the recognized goal of the patent laws in promoting the useful arts. Thus, if Congress believes that the promotion of the useful arts requires or even calls for the first-to-file system, it must be presumed to be constitutional.

⁴² 42 U.S. (1 How.) 202 at 206 (1843).

Adequate Control or Trademark Misuse— Trademark Licensor's Dilemma

LAURENCE H. PRETTY*

SUMMARY

A TRADEMARK LICENSOR'S DUTY to control the quality of the product or service provided by his licensees under the mark may conflict with various of the antitrust laws under some circumstances. Various types of such violation and their effect on the licensor are examined. A brief review of the business background and legal environment in which trademark licensing is carried on are included.

BUSINESS BACKGROUND

TRADEMARK LICENSING MAY BE DEFINED as a practice whereby the owner of a trademark or trade name licenses the use thereof to

* This paper was submitted by the author, as a third-year law student, in partial fulfillment of the requirements for the Seminar and Lecture Series given by The PTC Research Institute and faculty of The National Law Center of The George Washington University.

another who provides the product or service and sells it under the mark directly to purchasers.

Three common situations in which trademark licensing is common may be observed:

- (1) The situation in which the trademark owner himself provides the product or service but is limited in his ability to meet the demand. In this event the trademark owner may license others to provide the product or service (the terms will now be used interchangeably) under the trademark in return for a royalty.
- (2) The situation in which the trademark owner has developed a product which he does not himself provide (but which he may control in some way through patents, trade secrets and the like) but permits others to provide and sell under the trademark in return for a royalty.
- (3) The situation in which a group of small businesses in a given industry, unable to compete individually with the giants in that industry, form an association to promote a nationally known trademark for a product which they each provide and sell under the mark.

Although persons who have attempted to study the economic effects of franchising have been hampered by the lack of adequate statistical information,¹ there appears to be a general conclusion among such authorities that franchising provides employment for substantial numbers of people,² that it stimulates the development of small businesses,³ and that the practice has a beneficial effect on the economy.⁴

¹ Edwin Lewis, *The Franchise System of Distribution*, (University of Minnesota Press, 1963), p. 85: "The Census of Business which provides much factual data, does not distinguish franchise businesses, except in the case of automobile dealers, from other classifications. Furthermore, no private source has ever attempted a census of franchise businesses and to do so would result in only a rough approximation of the actual number of franchise holders, their sales volumes, locations, number of employees, payrolls and the like."

² *Ibid* at p. 87—The author estimates that there were at least 31,000 independent franchisees in 1963 excluding the much larger numbers of franchised automobile dealers and gas station operators.

³ David Schwartz, *The Franchise System for Establishing Independent Retail Outlets*, (Georgia State College, 1959): "Franchising systems appear to be an excellent means of developing and stimulating small businesses. To the extent that such systems are carefully managed and operated for the mutual interest of the franchisor and franchisee, they can be considered a definite asset to the economy."

⁴ See *Bernard Susser et al. v. Carvel Corporation et al.* (S.D.N.Y. 1962), 206 F. Supp. 636 at 640; 141 USPQ 609.

LEGAL ENVIRONMENT

The historical concept of a trademark as essentially comprising an indication of the source of origin of the goods was reflected in early common law doctrine, that a trademark could not be licensed except as incidental to a transfer of the business or property with which it had been used.⁵ However, with the development of the "guaranty" theory of trademarks, under which trademarks are considered to be primarily an indication of goods of uniform grade and quality to the purchasers, courts began to create exceptions to the rigid common law rules regarding trademark licensing.⁶ By 1946, the exceptions had become numerous and a revised Trademark Act enacted that year, the Lanham Act, made specific provision⁷ for use of trademarks by users other than the owner of the mark.

Under Section 5 of the Lanham Act, a registrant's mark may be used by a "related company" provided such mark is not used in such manner as to deceive the public. This proviso has been generally held by the courts to impose a duty on a trademark licensor to control the quality of the product produced by the licensee and sold under the mark.⁸ This is obviously necessary to avoid the possibility that licensees might otherwise attempt to pass off goods inferior to those normally sold under the mark.

It also will be appreciated that in addition to his legal duty to impose quality standards on the products sold and manufactured under the licensed mark, the licensor is generally commercially interested in so doing in order to maintain the goodwill of the mark.

However, on occasion, this duty of control may conflict with various requirements of the antitrust laws. Such conflict may arise because the licensor has deliberately used his duty of quality control as an excuse for conduct that violates the antitrust laws, or innocently in pursuance of methods that the licensor in good faith believes are necessary to maintain the goodwill of the mark. The sections of the antitrust laws with which conflict most frequently arises are Section 1 of the Sherman Act,⁹ directed to contracts in restraint of trade, Section 2 of the same

⁵ See for example *McMahan Pharmacal Co. v. Denver Chemical Co.*, 113 Fed. 468.

⁶ For an interesting account of the legal development of Trademark Licensing see "Quality Control and the Antitrust Laws in Trademark Licensing," *Yale Law Journal*, Vol. 72, (1963), pp. 1171, 1182-1193.

⁷ 60 Stat. 429 (1946); 15 U.S.C. 1055 (1958).

⁸ See for example, *U.S. v. Restonic Corp.* (D.C. Ill. 1960) CCH Trade Reg. Rep. 1960 Trade Cases para. 69,739. See also *Broeg v. Duchaine*, 67 N.E. 2nd 466.

⁹ 15 U.S.C. Section 1.

Act¹⁰ directed to attempts to monopolize, and Section 3 of the Clayton Act,¹¹ directed to commercial practices likely to lessen competition or create monopoly. Actual or potential violation of these and other provisions of the antitrust laws may occur in a variety of trademark licensing arrangements to be separately considered.

TYING AGREEMENTS

The first type of trademark license agreement to be considered is that in which the licensor requires the licensee to purchase some or all of the elements used to make the product, solely from the licensor. While this is a form of license provision that at first sight seems to be one closely related to the licensor's obligation to control the quality of the final product produced by the licensee, the licensor's real motive may sometimes be to make an additional profit on the tied item, as well as the royalty profit. Under certain circumstances¹² tying may constitute a per se violation both of the Sherman Act and of Section 3 of the Clayton Act, notably where a "not insubstantial" amount of interstate commerce is affected or if the licensor enjoys monopolistic power in the market for the tying product.

Court decisions in trademark licensing cases involving tying agreements do not appear to be entirely consistent. In the 1954 *Anchor Serum Company v. FTC*,¹³ a producer of serum for hog virus who licensed wholesalers to use "ANCHOR" as a trade name provided they purchased their serum requirements from him, was found by the court to have violated Section 3 of the Clayton Act. In reaching its decision, the court specifically discussed¹⁴ and declined to follow certain dicta in an earlier Supreme Court case, *Standard Oil Co. and Standard Stations v. U.S.*,¹⁵ regarding possible justifying circumstances for tying agreements and relied upon the Commissioner's finding that the arrangement presented a potential impediment to a substantial amount of competitive activity.¹⁶

¹⁰ 15 U.S.C. Section 2.

¹¹ 15 U.S.C. Section 14.

¹² For a discussion of such circumstances see James Eckmann, "Antitrust Problems in Trademark Franchising," *Trademark Reporter*, Vol. 55, No. 10 (October, 1965), pp. 835, 838-839.

¹³ *Anchor Serum Company v. FTC*, 217 F. 2nd 867 (1954).

¹⁴ *Ibid* at p. 871.

¹⁵ *Standard Oil Co. and Standard Station v. U.S.*, 337 U.S. 293.

¹⁶ *Anchor supra* note 13, at p. 872.

Other dicta in *Standard Stations*¹⁷ that tying may be possible where the "specifications for a substitute would be so detailed that they could not practicably be supplied"¹⁸ were examined in detail in *Susser v. Carvel Corporation et al.*¹⁹ The court indicated in dicta that "proof that the specifications for products to substitute for those offered by Carvel would be so complex and detailed as to make it impracticable for Carvel to establish such specifications" would justify a tying arrangement.²⁰

Other circumstances in which courts are more likely to look favorably upon tying agreements are those in which the tied source is a third party independent of the licensor, and arrangements in which several, mutually competitive tied sources are specified.²¹ In such circumstances the possibility that the licensor is motivated by a real desire to control product quality rather than to gain a second profit by anticompetitive means, is considerably enhanced.

Summarizing, it appears that tying agreements in a trademark license are likely to be found illegal where substantial anticompetitive effects are likely to result. Furthermore, in the restricted situations where tying is likely to be justifiable, involving a product of particularly complex specifications, it appears advisable to specify a plurality of tied sources which are mutually competitive and independent of the licensor.

TERRITORIAL RESTRICTIONS

Perhaps the most frequently litigated antitrust violation encountered in trademark licensing arises in connection with restrictions imposed in trademark license concerning the geographical areas within which the licensee may sell the trademarked product.

In considering this question it is first necessary to review certain antitrust cases not primarily of a trademark licensing nature, which courts have generally discussed in considering the validity of territorial restrictions. First in time is an old (1898) antitrust case, *Addystone Pipe and Steel v. U.S.*²² which has sometimes been taken to establish

¹⁷ *Standard* *supra* note 15, at p. 306.

¹⁸ *Ibid.*

¹⁹ *Carvel*, *supra* note 4.

²⁰ *Carvel*, *supra* note 4, 141 USPQ 609, at p. 615.

²¹ *Denison Mattress Factory v. The Spring Air Company*, 308 F. 2nd 403, 134 USPQ 537, 542; *Engbrecht v. Dairy Queen Co.* 203 F. Supp. 714, 133 USPQ 505, 508.

²² *Addystone Pipe and Steel v. U.S.*, 85 Fed. 271.

that territorial restrictions constitute a per se violation of the antitrust laws. However, as has been pointed out,²³ *Addystone* also included as dicta, the proposition that restrictions of trade ancillary to a valid main purpose may not be illegal. Sixty-five years later the Supreme Court in *White Motor Co. v. U.S.*,²⁴ involving a truck manufacturer distributing trucks to distributors having exclusive sales areas allocated by White, refused to find vertical territorial allocation as being per se illegal because too little concerning the impact of such agreements were known.²⁵ In another case involving vertical allocation of territories, *Sandura Co. v. FTC*,²⁶ a small and weak company competing against the national giants of the floor tile industry, was able to survive only by granting territorially exclusive areas to its dealers, who would not otherwise provide the advertising necessary to keep Sandura in business. In this case the court found no violation of the antitrust laws as the essential element was the success of the manufacturer,²⁷ not the desire of the dealers to avoid competition.

In the specifically trademark licensing field, the first major case, *Timken Roller Bearing Co. v. U.S.*²⁸ involved an agreement between American Timken and the British and French Timken companies to divide up world markets. The agreement even extended to bearings not sold under the Timken mark. The Supreme Court affirmed a lower court decision that such an arrangement constituted a violation of Sections 1 and 3 of the Sherman Act. In affirming, the Supreme Court appears to have given emphasis to the lower court's finding that "the trademark provisions [in the agreements] were subsidiary and secondary to the central purpose of allocating trade territories."²⁹

A more recent case, *Gray Line Inc. v. Gray Line Sight-Seeing*³⁰ involving an essentially horizontal division of territories among sight-

²³ See Sigmund Timberg, "Territorial Exclusives," *American Bar Association Journal*, Antitrust Section, Vol. 29 (1965), p. 244.

²⁴ *White Motor Co. v. U.S.*, 372 U.S. 253. For a commentary on *White*, see Stewart, "Exclusive Franchises and Territorial Confinement of Distributors," *American Bar Association Journal*, Antitrust Section, Vol. 29, p. 33.

²⁵ *White*, *supra* note 24: "This is the first case involving a territorial restriction in a vertical arrangement; and we know too little of the actual impact of both that restriction and the one respecting customers to reach a conclusion . . ."

²⁶ *Sandura Co. v. FTC*, 339 F. 2nd 847.

²⁷ See also *Snap On Tools Corp. v. FTC*, 321 F. 2nd 825.

²⁸ *Timken Roller Bearing Co. v. U.S.*, 341 U.S. 593, 89 USPQ 462. See also *U.S. v. Bayer, Inc.*, 135 F. Supp. 65.

²⁹ *Timken*, *supra* note 28, 89 USPQ 462, at 464.

³⁰ *Gray Line, Inc. v. Gray Line Sight-Seeing*, 246 F. Supp. 495, see also, Derenberg, "The 19th Year of the Administration of the Lanham Trademark Act of 1946," 150 USPQ 40.

seeing bus companies through a trademark licensor owned by an association of the companies, produced a similar result.

Trademark licensing agreements involving a vertical division of territories (as contrasted to the horizontal arrangements of *Timken* and *Gray Line*) have, however, fared somewhat better in the courts. In *Spring Air*,³¹ (previously mentioned in connection with tying), one issue related to the allocation by *Spring Air* of exclusive sales territories outside which the licensee for each area could not sell mattresses under the *Spring Air* brand. It is noteworthy that licensees were, however, permitted to sell private brand mattresses as they pleased. The court, after citing *Addystone*³² for support for the point that restraints of trade ancillary to a valid main purpose, may be valid, found that the restraint in *Spring Air* was justifiable in view of the licensor's duty to control the use of the mark. The Court distinguished from *Timken* on the grounds that the purpose was not primarily to divide territory and that no restraints were imposed upon the sale of mattresses sold under other marks.

A somewhat similar case involving license of a trademark for mattresses, *U.S. v. Sealy Inc.*³³ (currently awaiting Supreme Court review on a granted writ of certiorari) also upheld a vertically imposed territorial restriction. The Court noted that the arrangement had the valid objective of promoting intensive sales coverage.³⁴

Summarizing, it appears that trademark licensing provisions imposing territorial limitations which are primarily horizontal agreements between competing sellers, are illegal. However, where the arrangement is primarily one imposed by a licensor upon his licensees for the purpose of promoting interbrand competition and maintaining valid quality control, it is likely that no violation of the antitrust laws will be found.

EXCLUSIVE DEALING

Another licensing arrangement that may pose antitrust problems is the provision of an exclusive dealing clause in the license in which the

³¹ *Supra* note 21.

³² *Addison*, *supra* note 22.

³³ *U.S. v. Sealy, Inc.*, 1964 Trade Cases, para. 71,258.

³⁴ *Reversed U.S. v. Sealy Inc.*, 87 Sup. Ct. 1847 (1967). However, this result adds little to our knowledge concerning vertically imposed market division as the Supreme Court's decision was based on a finding that the market division in *Sealy* was in effect, horizontal market division, in view of the fact that the licensees also constituted the *Sealy* stockholders.

licensor requires that the licensee refrain from selling certain other products (usually, but not necessarily competing products) made by other producers.

Such arrangements have sometimes been found to create an anti-trust violation, such as the previously mentioned *Standard Stations*³⁵ case. In this case a requirement by Standard, who controlled about 7 percent of the relevant market, that franchised Standard Oil gas stations refrain from selling competing gasoline products was found to be a violation of Section 3 of the Clayton Act³⁶ as foreclosing competition in a substantial share of the line of commerce affected. It is noted in passing that the *Standard Stations* situation involves use of the licensor's mark primarily as a trade name rather than as a trademark, (in view of the fact that the quality and production of the product remained with the licensor).

However, by contrast, a later Supreme Court decision, *Tampa Electric Co. v. Nashville Coal Co.*,³⁷ involving an exclusive dealing arrangement between a coal supplier and an electric utility, (not involving a trademark), was found to be valid. At least one commentator³⁸ comparing *Tampa* with *Standard Stations* has concluded that the relative share of the total market controlled by the supplier may be a crucial factor in determining the legality of such arrangements.

In *Carvel*,³⁹ previously mentioned, a private triple damage suit was brought by certain franchisees against the franchisor on the basis of an alleged antitrust violation. A requirement in a license that the licensees sell only Carvel products or Carvel-approved products was not found to be a violation of the antitrust laws. With regard to the exclusion of competing products the court appears to have based its decision upon the failure of the plaintiffs to prove any economic anticompetitive effects (following *Tampa*).⁴⁰ With regard to the exclusion of products not competing directly with *Carvel* (which it is noted could not therefore present any possible violation of §3 of the Clayton Act, though possibly violative of §1 of the Sherman Act), the court based its reasoning on the need for the franchisor to safeguard its name by excluding products not under its control.⁴¹ A similar

³⁵ *Standard*, *supra* note 15.

³⁶ *Supra* note 11.

³⁷ *Tampa Electric Co. v. Nashville Coal Co.*, 365 U. S. 320 (1961).

³⁸ *Supra* note 12, at p. 848.

³⁹ *Carvel*, *supra* note 4.

⁴⁰ *Tampa*, *supra* note 37.

⁴¹ *Carvel*, *supra* note 4, at p. 616: "The antitrust laws certainly do not require that the licensor of a trademark permit his licensees to associate with that trademark other products unrelated to those customarily sold under the mark."

result was achieved independently in an *FTC* proceeding against *Carvel*.⁴²

Another case, *Engbrecht et al. v. Dairy Queen*,⁴³ also involving restrictions on the sale of other products, used reasoning similar to that to be used in the later *Carvel* case regarding the sale of noncompeting products.⁴⁴

Each of the preceeding cases, *Standard Stations*, *Carvel* and *Dairy Queen* involved situations primarily involving trade names. One case that treated the provision of an exclusive dealing clause in the license of a trademark used upon a product manufactured by a licensee trading under his own name, was the previously mentioned *Spring Air* case.⁴⁵ In *Spring Air* the licensee had agreed not to sell competing, nationally known brands of mattresses, although he was permitted to sell other mattresses under various private brands of his own. The reasoning of the portions of the *Spring Air* decision that dealt with the exclusive dealing issue, is unfortunately somewhat mixed with portions of the opinion that dealt with the tying issue. However, the court found no violation apparently, because "There was no evidence that either of these agreements inconvenienced Denison or restrained interstate commerce in any way."⁴⁶ However, the reasoning behind this portion of the *Spring Air* decision does not appear to be clearly expressed or related to specific sections of the antitrust laws and it appears that clarification of the law in this area must await the arrival of further cases.⁴⁷

The previous situations have concerned licensors who impose exclusive dealing provisions upon their licensees. One interesting case dealing with an apparent converse of the usual situation is *Phi Delta Theta Fraternity v. J. A. Buchroeder Co.*⁴⁸ In this case, a supplier of jewelry items, the licensee, had been granted exclusive national rights to sell jewelry items bearing trademarked fraternity insignia to the members of various fraternities who owned the trademarks—the li-

⁴² *Carvel*, *FTC Docket* 8574, 3 *CCH Trade Reg. Rep.*, para. 17,298.

⁴³ *Dairy Queen*, *supra* note 21.

⁴⁴ *Dairy Queen*, *supra* note 21, at p. 508: "There is credible evidence that the sale of food from Dairy Queen stores would have an adverse effect upon the sale of Dairy Queen products."

⁴⁵ *Spring Air*, *supra* note 21.

⁴⁶ *Spring Air*, *supra* note 21, 134 *USPQ* 537, 544.

⁴⁷ "In the absence of other decisions squarely in point, it would seem premature to enter upon any generalisations based upon the holding in the *Spring Air* case with respect to this particular restraint." Robert LeBlanc, "Antitrust Ramifications of Trademark Licensing and Franchising," *Trademark Reporter*, Vol. 53 (May 1963), pp. 519, 540.

⁴⁸ *Phi Delta Theta Fraternity v. J. A. Buchroeder Co.*, 251 F. Supp. 968.

censors. The court, on a stipulation of facts, found that a violation of the antitrust laws had occurred.⁴⁹ However, final disposition of this case has still to be achieved.

Reviewing the foregoing briefly, it appears that an exclusive dealing clause, excluding sale of competing products in a trademark license, where the licensor controls a share of the total market in excess of 7 percent, is likely to be found a violation of Section 3 of the Clayton Act. Similar clauses regarding the sale of noncompeting products may present a potential Section 1 Sherman Act violation, but are likely to be viewed more leniently by the courts, particularly where the licensee is operating under a licensed trade name primarily. Where the licensee is manufacturing a product for sale under a licensed trademark, the status of an exclusive dealing provision is less clear, but at least one decision, *Spring Air*, suggests that in certain circumstances there may be no violation of the antitrust laws.

RESALE PRICE MAINTENANCE

License provisions in which the licensor requires that the licensee resell the trademark product to purchasers at a uniform resale price, are considered a per se violation of the antitrust laws,⁵⁰ (in particular, Section 1 of the Sherman Act), with the exception of such agreements occurring in states having fair trade laws.⁵¹ Even in fair trade states it is important that resale price maintenance should not be practiced as between the licensor and licensee in a situation where they are both competing to sell to the same customers.⁵²

In attempting to achieve the same result by other means, some companies have attempted to follow the holding of *U.S. v. Colgate*⁵³ in which the Supreme Court upheld a manufacturer who unilaterally refused to deal with a retailer who would not follow the manufacturer's suggested retail price. The vitality of *Colgate* has been largely drained, however, by a subsequent Supreme Court decision, *U.S. v. Parke Davis*,⁵⁴ which in effect held that refusal to deal was not, in

⁴⁹ *Ibid* at p. 974.

⁵⁰ Sealy, *supra* note 33.

⁵¹ Miller-Tydings Act of 1937; McGuire Act of 1952.

⁵² *U.S. v. McKesson and Robins Inc.*, 351 U.S. 305; *See also Snap On*, *supra* note 27, at p. 835.

⁵³ *U.S. v. Colgate*, 250 U.S. 300.

⁵⁴ *U.S. v. Parke Davis*, 362 U.S. 29.

fact, unilateral where it arose after representations were made to the manufacturer by other complaining retailers.

About the most a trademark licensor can realistically hope to achieve in pursuing the goal of uniform retail prices for his product, is to suggest prices for which the product should be sold retail and then avoid any attempt to actually enforce these prices. Suggested retail prices in these circumstances do not apparently constitute a violation of the antitrust laws.⁵⁵

CONSEQUENCES OF ANTITRUST VIOLATION

A trademark licensor who commits an antitrust violation is likely to find himself subjected to a number of adverse consequences.

Federal action against an antitrust violator may take the form of a civil suit instituted by the Justice Department or by the Federal Trade Commission, resulting in a civil judgment, cease and desist order, or consent decree, with monetary penalties usually being imposed only for subsequent violations. If the antitrust violation is of a particularly blatant and obnoxious character, the Justice Department may institute a criminal action which may result in fines against the company, as well as fines, or even prison for officers or directors of the company.

A state may also choose to proceed against a violator under state antitrust laws, where applicable, though until recently, lax enforcement of local antitrust laws in most states has reduced the significance of this possibility.

A further incentive against antitrust violations is the possibility that the violator will thereby expose himself to a private, treble damage suit⁵⁶ by an injured party under Section 4 of the Clayton Act.⁵⁷ In this connection, it should be noted that a judgment for the government in a prior suit, is available as *prima facie* evidence of violation for the individual bringing the later treble damage suit.

Also significant to a trademark licensor is the possibility that he may be unable to enforce his mark against an infringer by virtue of Section 33b (7)⁵⁸ of the Lanham Act which makes antitrust violations a defense. Although some commentators have argued that this section does not affect the merits of the controversy, but merely the evidenti-

⁵⁵ See *Spring Air*, *supra* note 21; *Carvel*, *supra* note 4.

⁵⁶ *Carvel*, *supra* note 8.

⁵⁷ 15 U.S.C. 15, 15a, 15b, 16.

⁵⁸ 15 U.S.C. 1115.

ary weight of registration,⁵⁹ the body of opinion and recent case decisions⁶⁰ seem to favor the view that Section 33b (7) furnishes a full affirmative defense against a charge of trademark infringement.

Trademark misuse also may defeat an action on the license by the licensor for royalties owed for breach of contract, on general principals of equity or even on state antitrust laws.⁶¹

CONCLUSION

It becomes apparent in considering the subject of trademark misuse that there are relatively few cases dealing squarely with this topic and that most of them have arisen within the last 20 years. Indeed, as recently as 1961, one commentator could declare flatly, "to date there is no body of law with respect to trademark licensing which is comparable to the misuse doctrine as applied to patent licensing."⁶² Perhaps one reason for this paucity is that until the comparatively recent development of large national chains of franchise businesses, the majority of strong trademarks were rarely made available by their owners for licensing, while such relatively weak marks that were available had insufficient economic leverage to enable the licensor to effectuate misuse.

However, it is apparent that the emergence of strong marks available for licensing to franchisees has spurred an increase in the development of case law dealing with trademark misuse. In resolving these questions courts are presently tending to proceed on almost an *ab initio* approach in each case with close attention to the economic status of the parties and the reasonableness of the restrictions, rather than by applying a broad body of rules. Although such rules must inevitably emerge, it appears that the present stage is one essentially of creative development of the law.

⁵⁹ For example, see "Unclean Hands in Trademark Infringement," *Columbia Law Review*, (January 1965), pp. 109, 115.

⁶⁰ Buchroeder, *supra* note 47. See also "The Antitrust Defense in Trademark Infringement," *Virginia Law Review*, Vol. 45 (1959), p. 48.

⁶¹ *Jackson Brewing Co. v. Clarke*, CCH Trade Reg. Rep. 1964 Trade Cases, para. 71,082.

⁶² Krayner, "Domestic Trademark Licensing," 43 *JPOS* 574, 584.

REVIEWS AND ANNOTATIONS

Recently Published or Reported Material Relating to the Research Institute's Work

Books

Bugbee, Bruce W., *The Genesis of American Patent and Copyright Law*, Washington, D.C.: Public Affairs Press, 1967. 208 pp. \$6.

"The Genesis of American Patent and Copyright Law" is very readable and informative. Mr. Bugbee adds interesting background to the bare words on patents and copyrights in the Constitution. He presents the European origins of industrial and intellectual property in Chapter 2, the interrelations between the Colonial Period and the English experience in Chapter 3, the developments in patent and copyright law in the States in Chapters 4 and 5 and the drafting of the Constitutional provision and early patent and copyright laws in Chapter 6.

The book clearly evidences a considerable amount of research. It should prove invaluable for scholars and students interested in the history of the American patent and copyright systems. Aside from some minor errors relating to legal terms this is a workmanlike job. A reading of

the book, however, leaves one with a strongly felt need for much more information, particularly of a legal nature. A history of the systems written by a patent or copyright lawyer, using Mr. Bugbee's contribution as a nucleus, would be most timely and useful.

The author cites a sizable body of patent and copyright literature. Curiously, a relatively large part of this cited literature is quoted in the text. The whole work would have benefited had more of these quotations been included in the footnotes or an appendix. Mr. Bugbee scores a very distinct plus and should be encouraged to continue his research in the history of the patent and copyright systems.

Blood, Jerome W. (ed.), *Utilizing R&D By-Products*, New York: American Management Association, 1967. 127 pp. \$7.50.

Sixteen brief essays, by different authors, on patent licensing and other ways to derive economic profit from the "spin-off"

of research and development programs having other primary targets.

Crowther, J. G. (2nd ed.), *The Social Relations of Science*, Chester Springs, Pennsylvania: Dufour. 1967. 486 pp. \$8.95.

Gipe, George A., *Nearer to the Dust: Copyright and the Machine*, Baltimore: Williams and Wilkens, 1967. 308 pp. \$4.95.

Gowan, J. C., G. D. Demos, and E. P. Torrance (eds.), *Creativity: Its Educational Implications*, New York: Wiley, 1967. 350 pp. \$7.95 (Paperback \$4.95).

Kaplan, Benjamin, *An Unhurried View of Copyright*. New York: Columbia University Press, 1967. 142 pp. \$5.

"Invited to give the James S. Carpentier Lectures for 1966 at Columbia University, Professor Kaplan chose the provocative subject of copyright.

". . . Lecture I 'The First Three Hundred Fifty Years,' sketches the evolution of ideas about the ownership of literary, musical and artistic works from their origins in the English censorship of the Sixteenth century up to the enactment of our present copyright statute in 1909.

". . . In 'Plagiarism Reexamined,' present-day notions of copyrightability and of infringement of copyright are anat-

mized in a search for the considerations of public policy that do or should underlie copyright protection.

". . . The concluding lecture, 'Proposals and Prospects,' deals with the major suggestions for reform of our copyright law that have emerged from the debates of the past decade and have entered into the new draft legislation. . . . After considering mechanisms for accommodating the law to environmental changes, the lecture speculates about the long-range future of copyright as a social control. . . .

". . . Professor Kaplan's emphasis on the desirability of greater freedom of dissemination of ideas is especially significant because it is at odds with a strong contemporary trend toward more restrictive and longer protection of the exclusive rights of writers and composers. . . ."

Kleinmuntz, Benjamin (ed.), *Problem Solving: Research, Method and Theory*, New York: Wiley, 1966. 406 pp. \$6.95.

Newby, Frank, *How to Find Out About Patents*, London: Pergamon Press, 1967. 177 pp.

". . . the readers primarily envisaged for this monograph are persons concerned with the use of patent literature as part of their duties as industrial patents and information officers. . . .

". . . the monograph is not in-

tended as a treatise on patent law . . .

" . . . the patent searches and other tasks comprehended in the title of this book, *How to Find Out About Patents*, are undertaken by free-lance workers and juniors in the employ of firms of patent agents, but their activities are not usually regarded as coming within the professional duties of chartered agents themselves. In any case, whether the tasks involving the use of patent literature are carried out by the information officer or not, it is submitted that a perusal of this monograph may be worth while even for the information officer whose concern with patents is limited to their use as sources of technical information.

"The general plan of the monograph is firstly a description of the literature available for finding out about patents followed by a detailed consider-

ation of the techniques used to extract any desired information from this."

Shaw, B. T., *The Use of Quality and Quantity of Publication as Criteria for Evaluating Scientists*, U.S. Department of Agriculture, Washington, D.C.: Government Printing Office, 1967. 80 pp. \$0.50.

Taylor, A. M., *Imagination and the Growth of Science*, New York: Schocken, 1967. 118 pp. \$3.95.

Taylor, C. W. and F. E. Williams (eds.), *Instructional Media and Creativity*, New York: Wiley, 1966. 397 pp. \$8.95 (Paperback \$5.95).

Weinberg, Alvin M., *Reflections on Big Science*, Cambridge, Massachusetts: Massachusetts Institute for Technology Press, 1967. 192 pp. \$7.50.

Periodicals

"Adoption of the Uniform Deceptive Trade Practices Act in Iowa," *Iowa Law Review*, Vol. 52 (October 1966), p. 269.

American Bar Association Copyright Symposium: The Clearing House System for Licenses—A Possible Solution for the Copyright Problems of an Exploding Technology? H. Finkelstein; The Clearing House System for Li-

censes, S. M. Stewart; Information Retrieval and the Copyright Law, D. J. Cunningham, *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (October 1966), p. 1.

Anderson, Richard A., "Antitrust Law Violations Possible from Application of the Doctrine of Unclean Hands to Conduct During the Procurement of a Pat-

tent," *Journal of the Patent Office Society*, Vol. 49, No. 2 (February 1967), p. 128.

"In light of the recent cases finding 'bad' conduct during prosecution of patent applications in order to remove the acts protected by the patent from exemption from trade regulation law and the resultant trade regulation violations found, a high standard of conduct should be maintained during all stages of patent prosecution. If a self-imposed high standard is adhered to by patent applicants and attorneys, perhaps no additional obligations or duties to disclose information to the Patent Office will be imposed upon the profession by the courts or Congress."

Ansel, E. O., "'Flat-Rate' Package Licenses and the Post-Expiration Royalty—Worlds in Collision." *Federal Bar Journal*, Vol. 26 (Summer 1966), p. 206.

Arnold, Tom, "A Federal Unfair Competition Law, McClellan S. 3681, 89th Congress," *Trademark Reporter*, Vol. 57, No. 2 (February 1967), p. 116.

"McClellan S. 3681, 89th Congress, which is reprinted following this article, is basically a jurisdictional bill—a bill to give federal courts jurisdiction over unfair competition causes concurrent with state court jurisdiction. . . .

"In this article I will review the policies adopted by the American Patent Law Association Board for they constitute the heart of S. 3681. . . ."

Austin, A. D., "Product Identity and Branding under the Robinson-Patman Act: Is the FTC Approach Consistent with the Realities of the Market Place?" *Villanova Law Review*, Vol. 12 (Winter 1967), p. 251.

Barton, E. E. "Limitations of Territory, Field of Use, Quantity and Price in Know-How Agreements with Foreign Companies," *University of Pittsburgh Law Review*, Vol. 28 (December 1966), p. 195.

Bates, R. C., "Copyright by Anon.," *American Bar Association Journal*, Vol. 52 (December 1966), p. 1140.

Baxter, W. F., "Legal Restrictions on Exploitation of the Patent Monopoly: an Economic Analysis," *Yale Law Journal*, Vol. 76 (December 1966), p. 267.

Beran, M. J., "Protection of Slogans in the Patent Office and the Courts," *Trademark Reporter*, Vol. 57 (April 1967), p. 219.

"Biography and Copyright Law," *New York University Intramural Law Review*, Vol. 22 (March 1967), p. 208.

Birch, Robert L., "Booby Traps in German-English Patent Work: Spellings, Abbreviations, and Contrasting Usage," *Journal of the Patent Office Society*, Vol. 49, No. 2 (February 1967), p. 81.

"Parkinson's Law requires that every expert try to monopolize his knowledge, but the following comments are offered not so much to help the patent agent or examiner in information he is supposed to seek (finding it usually brings more headaches) but to show the techniques of expert-teasing in the German bookman's jungle."

Birch, R. L., "Creative Incentive: The Patent System and the Incubation of Industrial Hardware," *Journal of the Patent Office Society*, Vol. 48 (November 1966), p. 689.

Bogucki, R. A., "Theory and Practice of Patent Reform," *Los Angeles Bar Bulletin*, Vol. 42 (February 1967), p. 152.

Bork, Robert H., "The Supreme Court Versus Corporate Efficiency," *Fortune*, Vol. 78, No. 3 (August 1967), pp. 92 ff.

Boyle, J., "Patent Centennial Celebration of 1891," *Journal of the Patent Office Society*, Vol. 48 (November 1966), p. 663.

Bricker, S. M., "Thirty Months Af-

ter *Sears and Compco*," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (April 1967), p. 293.

"Brief in Support of Congressional Passage of Proposed Unfair Competition Amendment to Lanham Trademark Act of 1946," *Trademark Reporter*, Vol. 57, No. 2 (February 1967), p. 88.

"The annexed draft seeks to establish a uniform body of federal unfair competition law by creating a federal statutory tort of unfair competition affecting interstate commerce, and by establishing federal jurisdiction over such private tort claims, within the well-tested framework of the (Lanham) Trademark Act of 1946. The crux of the proposed bill is a revised Section 43(a) of the Lanham Act including in five subsections, those torts generally acknowledged to give rise to the major portion of unfair competition law. In a sixth subsection, provision is made for the courts to deal with other and miscellaneous types of unfair trade."

Bylinsky, Gene, "General Doriot's Dream Factory," *Fortune*, Vol. 78, No. 3 (August 1967), p. 103.

The story of American Research and Development Corporation, a Boston venture-capital company founded in 1946 to aid fledgling science-based firms. Among the successful firms ben-

efiting from early financial (and other) support are Digital Equipment Corporation, Tera-dyne, Inc., and High Voltage Engineering Corporation.

Cary, G. D., "Quiet Revolution in Copyright: The End of the 'Publication' Concept," *George Washington Law Review*, Vol. 35 (May 1967), p. 652.

Cary, G. D., "Rio Inter-American Meeting of Copyright Experts: A Summary," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (December 1966), p. 117.

"CATV and Copyright Liability," *Harvard Law Review*, Vol. 80 (May 1967), p. 1514.

"CATV and Copyright Liability: On a Clear Day You Can See Forever," *Virginia Law Review*, Vol. 52 (December 1966), p. 1505.

"Choreography and Copyright," *Copyright Law Symposium (AS-CAP)*, Vol. 15 (1967), p. 172.

Cole, Stephen and Jonathan R. Cole, "Scientific Output and Recognition: A Study in the Operation of the Reward System in Science," *American Sociological Review*, June 1967, p. 377.

According to this survey of the quantity and quality of the work of 120 university physicists, "the reward system operates to

encourage creative scientists to be highly productive, to divert the energies of less creative physicists into other channels, and to produce a higher correlation between quantity and quality of output in the top departments than in the weaker departments."

"'Combinations' in Restraint of Trade: A New Approach to Section 1 of the Sherman Act," *Utah Law Review*, Vol. 1966 (July 1966), p. 75.

"Common-Law and Statutory Sanctions for Industrial Espionage—A Need for Revision," *Iowa Law Review*, Vol. 52 (August 1966), p. 63.

"Common-Law Copyright Protection for Written Industrial Work Product," *Utah Law Review*, Vol. 1967 (March 1967), p. 95.

"Community Antenna Television and the Copyright Law: End of the Honeymoon," *Kansas Law Review*, Vol. 15 (March 1967), p. 325.

Conley, N. L., "Considerations in Patent Litigation Brought About by *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.* (86 Sup. Ct., 347)," *South Texas Law Journal*, Vol. 9 (1967), p. 9.

"Copyright—Community Antenna

Television—Unlicensed Transmission of a Licensed Broadcast Infringes the Exclusive Statutory Right to Perform Publicly a Copyrighted Work," *Iowa Law Review*, Vol. 52 (October 1966), p. 334.

"Copyrights — Infringement — Pictorial Works," *Western Reserve Law Review*, Vol. 18 (January 1967), p. 695.

"Copyright—The Law of Publication," *University of Missouri at Kansas City Law Review*, Vol. 35 (Winter 1967), p. 158.

"Customer Lists As Trade Secrets in Ohio," *Western Reserve Law Review*, Vol. 18 (November 1966), p. 232.

Dam, Kenneth W., "Trademarks, Price Discrimination and the Bureau of Customs," *Trademark Reporter*, Vol. 57, No. 1 (January 1967), p. 14.

"The practical effect of Section 526 is to permit a foreign manufacturer indirectly to enlist the aid of the United States Bureau of Customs to exclude trademarked foreign goods from the United States whenever the imports might undercut a two-price system under which a higher price is charged in the United States than abroad. Since such a two-price system is undercut directly whenever a commercial importer resells and indirectly whenever a consumer imports

for his own use, both types of imports may be physically excluded. Imports that would not undercut a two-price system—that is to say, approved imports to be sold at the high price, become the sole imports to be permitted through the customs gate. This legislative legacy from the protectionist decade which culminated in the Smoot-Hawley Tariff of 1930 needs reexamination, particularly in the present era of the General Agreement on Tariffs and Trade (GATT) and the Trade Expansion Act."

Deller, A. W., "Inventions, Patents and Civilization," *Journal of the Patent Office Society*, Vol. 48 (June 1966), p. 348.

"Design Protection," *Copyright Law Symposium (ASCAP)*, Vol. 15 (1967), p. 79.

"'Disk-televison': Some Recurring Copyright Problems in the Reproduction and Performance of Motion Pictures," *University of Chicago Law Review*, Vol. 34 (Spring 1967), p. 686.

"Disparagement Under the Uniform Deceptive Trade Practices Act," *Trademark Reporter*, Vol. 56 (December 1966), p. 911.

Dobkin, J. A., "Patent Policy in Government Research and Development Contracts," *Virginia Law Review*, Vol. 53 (April

1967), p. 564.

"Doctrine of Inventorship: Its Ramifications in Patent Law," *Western Reserve Law Review*, Vol. 17 (June 1966), p. 1342.

Doerfer, G. L., "Limits on Trade Secrets Law Imposed by Federal Patent and Antitrust Supremacy," *Harvard Law Review*, Vol. 80 (May 1967), p. 1432.

"Effect of the Copyright Act and the Proposed Revision on Educators As Users of Copyrighted Materials," *Copyright Law Symposium (ASCAP)*, Vol. 15 (1967), p. 134.

"Family Name Dilemma: a Question of 'Fairness'," *Boston College Industrial and Commercial Law Review*, Vol. 8 (Winter 1967), p. 319.

Frayne, Gabriel M., "A Few More Thoughts on Possible United State Adherence to the Madrid Arrangement," *Trademark Reporter*, Vol. 57, No. 7 (July 1967), p. 447.

"Previous articles on the possibility of United States adherence to the Madrid Arrangement have tended to focus on the technical advantages and disadvantages flowing from the specific provisions of that Arrangement. Such an approach performs an essential task. Nevertheless, it is not enough to look upon the

Madrid Arrangement as an isolated technical device. It must be considered in the context of the existing state of the use and protection of trademarks on the international level, and of the direction which developments in such use and protection ought to take."

Frost, G. E., "Tying Clauses and Package Licensing," *University of Pittsburgh Law Review*, Vol. 28 (December 1966), p. 207.

Garner, Lewis S., Francis J. Sullivan and William Hedelund, "Pressing and Resisting Trademark Infringement Claims Short of Litigation," *Trademark Reporter*, Vol. 57, No. 3 (March 1967), p. 172.

"This subject comprises, in essence, the strategy involved in connection with so-called 'cease and desist' letters which are commonly sent out in the course of trying to settle trademark controversies prior to resorting to litigation. There are no fixed rules and there is very little law which is applicable. Many problems occur again and again and it might be useful to discuss some practical approaches to them."

Gaughan, L. D., "Advertisements Which Identify 'Brand X'—A Trialogue on the Law and Policy," *Fordham Law Review*, Vol. 35 (March 1967), p. 445.

- Goldman, A. A., "Copyright Law: Nearly Sixty Years Later," *Ohio State Law Journal*, Vol. 28 (Spring 1967), p. 261.
- Goldsmith, I., "Drugs in Canadian Patent Law," *McGill Law Journal*, Vol. 13 (1967), p. 232.
- Gruber, W., D. Mehta and R. Vernon, "The R&D Factor in International Trade and International Investment of United States Industries," *Journal of Political Economy*, February 1967, p. 20.
- Hansen, W. L., "The Economics of Scientific and Engineering Manpower," *Journal of Human Resources*, Spring 1967, p. 191.
- An inquiry into the meaning of "shortages" with respect to technical manpower and into the plausibility of projections of requirements and supply. Proposes that assessment of shortages be based on estimated "internal rates of return on investment"—on "finding that rate of discount which equates the present value of costs (direct plus income foregone) of education required for entry into an occupation with the present value of the incremental earnings stream yielded by the education."
- Harding, V. M., "Trade Secrets and Mobile Employee," *Business Lawyer*, Vol. 22 (January 1967), p. 395.
- Harrison, O. C., "Penal Actions for Trademark Infringement—A Survey of Statutes and Cases," *Trademark Reporter*, Vol. 57 (May 1967), p. 285.
- Herbert, Evan, "A Special Report on Technology for Education," *International Science and Technology*, August 1967, p. 28.
- Describes new developments in educational technology (e.g. programmed learning and the use of the computer) and considers their implications for the role of the teacher and for the optimization of the learning environment.
- Herbert, George A., "It's Time to Take the 'Printing' out of 'Printed Publications,'" *Journal of the Patent Office Society*, Vol. 49, No. 1 (January 1967), p. 39.
- "In view of the sweeping revisions which are being contemplated, it is an object of this paper to suggest a statutory change which could have a beneficial effect on patents while recognizing some of the technological advances which have been made. This change goes to the use of the phrase 'printed publication,' a phrase which has been present since the initial patent statutes were legislated. . . .
- " . . . the cases and articles which have dealt with two particular areas where the issue of what constitutes a printed publication arises have defined a

series of tests. These tests are believed to objectively define which single documents, not 'printed,' can be used as references either during the prosecution of patent applications before the Patent Office or during the litigation of patents before the courts. Hence, it is another object of this paper to analyze these decisions and the discussions they have promulgated and to set forth these objective tests as a matter to be considered in the suggested revision of the Patent Laws. . . ."

Helfer, P. F., "Copyright Revision and the Unauthorized Duplication of Phonograph Records—A New Statute and the Old Problems: A Job Half Done," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (December 1966), p. 137.

Hesser, T., "Intellectual Property Conference of Stockholm, 1967," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (April 1967), p. 267.

Holland, J. L., "Current Psychological Theories of Occupational Choice and Their Implications for National Planning," *Journal of Human Resources*, Spring 1967, p. 176.

Deals with the adequacy of current psychological notions and concepts for improving the pool of potential scientific and

other professional employees.

"Imitation of Building Design Held Not To Be Unfair Competition," *Utah Law Review*, (December 1966), p. 726.

"Impact of the Supreme Court Section 103 Cases (*Graham v. John Deere Co.* 86 Sup. Ct. 684, *U.S. v Adams*, 86 Sup. Ct. 708) on the Standard of Patentability in the Lower Federal Courts," *George Washington Law Review*, Vol. 35 (May 1967), p. 818.

Inada, T., "International Know-How Licensing and Territorial Restraint Clauses," *Harvard International Law Journal*, Vol. 8 (Spring 1967), p. 241.

"Industrial Espionage: Piracy of Secret Scientific and Technical Information," *U.C.L.A. Law Review*, Vol. 14 (March 1967), p. 911.

Inselbuch, E., "First Publication Abroad—Investive—Divestive or Inoperative? A Territorial View of Copyright," *Fordham Law Review*, Vol. 35 (March 1967), p. 477.

"International Law—European Convention on Human Rights—Commission Decides to Consider Dutch Copyright Decision Challenged on Freedom of Expression Grounds," *Harvard Law Review*, Vol. 80 (June 1967), p. 1798.

"Is CATV Infringing Proprietary Rights in Television Broadcasts?", *Copyright Law Symposium (ASCAP)*, Vol. 15 (1967), p. 153.

Jackson, Joseph Gray, "Booby Traps in License Agreements—The Customs Problem," *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 439.

"1. If the license is exclusive even for a limited part of the United States, the license fee or initial royalty payment is not part of value for customs purposes.

"2. Whether or not the license is exclusive or non-exclusive, a running royalty which by nature arises after the transfer of title is not part of value. The same would seem to be true of a minimum royalty.

"3. If the license is non-exclusive, a license fee which must be paid in order to get title is likely to be considered part of value.

"4. The question of whether the license payment must be made before or after title passes may be of great importance.

"5. Bringing all phases of the patent agreement to the attention of the Collector of Customs when duty is paid may be very useful in preventing assessment of a penalty."

Jacobs, A. A., "Trade Secrets—Their Use and Misuse," *Practical Lawyer*, Vol. 13 (January 67), p. 67.

Jansky, J., "Choice of Law and Trademark License Agreements," *International and Comparative Law Quarterly*, Vol. 16 (April 1967), p. 393.

Kananen, R. P., "Comments and Observations on *Res Judicata* and Patent Law," *Western Reserve Law Review*, Vol. 18 (November 1966), p. 103.

Kase, F. J., "Copyright in Czechoslovakia—The New Copyright Statute," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (October 1966), p. 28.

Kastenmeier, R. W., "Information Explosion and Copyright Law Revision," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (February 1967), p. 195.

Kayton, I., "This Year (1966) in Patent Law," *George Washington Law Review*, Vol. 35 (May 1967), p. 720.

Keesing, Donald B., "The Impact of Research and Development on United States Trade," *Journal of Political Economy*, February 1967, pp. 38-45.

Kegan, Esther O., "Does Federal Trademark Law Apply to Puerto Rico? Yes! No!," *Trademark Reporter*, Vol. 57, No. 1 (January 1967), p. 12.

"We have determined that Congress intended the Lanham Trademark Act to extend regis-

tration rights to trademark users in all geographical areas protected by the United States. The establishment of the Commonwealth of Puerto Rico did not withdraw the Island from the protected ambit of the United States. Accordingly, whatever theory is utilized to define the relationship between the United States and the Commonwealth, it appears reasonable to conclude that a Puerto Rican resident may obtain a federal trademark registration even if such mark is used exclusively within the Island of Puerto Rico."

Kennedy, J. B., Jr., "Patent and Antitrust Policy: The Search for a Unitary Theory," *George Washington Law Review*, Vol. 35 (March 1967), p. 512.

Kitch, Edmund W., "*Graham v. John Deere Co.*: New Standards for Patents," *Journal of the Patent Office Society*, Vol. 49, No. 4 (April 1967), p. 242.

"The three distinct tests of patentability can be denominated, in the order of their historic development, the 'novelty' test, the 'genius' test, and the 'non-obviousness' test. It is the thesis of this paper that only the last survives the decision in *Deere*."

Krasilovsky, M. W., "Observations on Public Domain," *Bulletin of the Copyright Society of U.S.A.*, Vol. 14 (February 1967), p. 205.

Ladas, Stephen P., "Proposal for a New Agreement for International Registration of Trademarks," *Trademark Reporter*, Vol. 57, No. 7 (July 1967), p. 433.

"... The conclusion may fairly be stated that, from the point of view of American trademark owners, the disadvantages of adherence far outweigh the advantages under the present text of the Madrid Arrangement.

"There has been a suggestion made by the supporters of adherence that the United States should adhere to the Madrid Arrangement and then propose amendments to the text to suit the interests of American trademark owners. Obviously, this is a most unwise procedure. Any amendment of the Madrid Arrangement would have to meet the unanimous approval of all of the member States now forming part of the Madrid Arrangement. Refusal of a single country may defeat any proposed amendment.

"The wise and proper procedure is for the United States to take the initiative and propose a new Agreement, just as the United States did in arranging for the adoption of the Universal Copyright Convention."

"Lanham Act—A Method for the Registration and Protection of a Trademark Plus a Statutory Remedy for False Advertise-

ment," *University of Illinois Law Forum*, Winter 1967, p. 1124.

"Later Patents As Prior Art," *Washington University Law Quarterly*, Winter 1967, p. 78.

Launius, Ralph W., "Some Aspects of the Right to Trial by Jury in Patent Cases," *Journal of the Patent Office Society*, Vol. 49, No. 2 (February 1967), p. 116.

"... if a case contains at least one legal issue mixed with equitable ones, then the party raising it is generally entitled to a jury trial thereon. Normally, validity and infringement of a patent are legal issues, and entitled to jury trial; an exception is the *Shubin* case where the court in ruling on validity did not find even one legal issue to be present. Even though couched as an equitable claim, an accounting for profits raises legal issues concerning damages and is entitled to a jury trial thereon. Exemplary damages and attorneys fees are not equitable in nature, but are not issues to be considered by the jury."

Lefokowitz, S., "Trademarks and Attorneys in Action in Adversary Proceedings Before the Trademark Trial and Appeal Board," *Trademark Reporter*, Vol. 56 (November 1966), p.793.

Levitsky, S. L., "Importance of Trademark Protection in the Socialist Countries for Western

Economies," *Trademark Reporter*, Vol. 56 (November 1966), p. 838.

Libott, R. Y., "Round the Prickly Pear: The Idea-Expression Fallacy in a Mass Communications World," *U.C.L.A. Law Review*, Vol. 14 (March 1967), p. 735.

Lightman, Joseph, "Trade Protections Revised—Report on the Stockholm Intellectual Property Conference (Patents, Trademarks and Copyrights)," *International Commerce*, Vol. 73, No. 37 (September 11, 1967), p. 7.

"Literary Titles—Copyrightable or Trademarkable," *Trademark Reporter*, Vol. 57 (March 1967), p. 151.

Lorenzo, Alfred P., "Insufficient Disclosure, Obviousness, and the Reasonable Man," *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 397.

"It is submitted that where an applicant for patent briefly describes the essential elements of his invention, points out the best manner known to him for practicing it, gives reasonably full details of the manner in which one working example was performed, and points out the extent of any additional experimental work conducted, such as by tabular representation of the data obtained, he has, or should have, complied with 35 U.S.C.

112 since he has provided a disclosure which is an enabling disclosure to one skilled in the art."

Lunsford, Julius R., Jr., "Private Investigators as *Amici Curiae* in Trade Identity Cases," *Trademark Reporter*, Vol. 57, No. 1 (January 1967), p. 42.

"The courts have not issued any guidelines for surveys or how they should be conducted or by whom. We do know that they have been conducted by advertising agencies, college professors, psychologists, commercial research organizations, and investigators. So long as the tests are designed to be free from attack on the ground that they are prejudiced or designed to suggest the desired response, they should be admitted in evidence and considered in determining the likelihood of confusion. If conducted by experienced trade examiners or investigators whose compensation is fixed and not dependant upon the outcome, then the probative value is enhanced."

McCormick, C. E., "Trademarks—Successful Plaintiffs in Trademark Infringement Actions Under the Lanham Act May Not Recover Attorneys Fees," *Trademark Reporter*, Vol. 57 (May 1967), p. 343.

"'Meeting Competition' Defense of the Robinson-Patman Act and

Quantity Discount Systems," *Cornell Law Quarterly*, Vol. 52 (Spring 1967), p. 802.

Mummery, J. "Copyright in Letters," *New Law Journal*, Vol. 117 (May 4 1967), p. 485.

Mummery, J., "Parody and Plagiarism," *New Law Journal*, Vol. 116 (December 15, 1966), p. 1651.

Mummery, J., "Protection of Trade Secrets," *New Law Journal*, Vol. 117 (February 9, 1967), p. 145.

Nimmer, M. B., "Implications of the Prospective Revisions of the Berne Convention and the United States Copyright Law," *Stanford Law Review*, Vol. 10, (February 1967), p. 499.

O'Brien, G. D., "Appraisal of the Report of the President's Commission on the Patent System," *Journal of the Patent Office Society*, Vol. 49 (March 1967), p. 139.

"Patents, Know-How and Antitrust Symposium"—Introduction, C. V. Anderson; Patents Antitrust and Innovation, D. F. Turner; Acquisition of Patents and Know-How by Grant, Fraud, Purchase and Grant-Back, J. C. Stedman; Fish Traps, Indians and Patents: the Antitrust Validity of Patent License Restrictions on Sales

- Price, Field of Use, Quantity and Territory, H. J. Austern; Limitations of Territory, Field of Use, Quantity and Price in Know-How Agreements with Foreign Companies, E. E. Barton; Tying Clauses and Package Licensing, G. E. Frost; The Validity Under the Antitrust Laws of Cooperation Arrangements Among Patent Owners, L. I. Wood; Patent and Know-How Aspects of Private Antitrust Cases, W. Rowley; Scope of Relief in Government Patent and Know-How Antitrust Cases, M. A. Hollabaugh and D. V. Rigler—*University of Pittsburgh Law Review*, Vol. 28 (December 1966), p. 147.
- "Patent Law and the Supreme Court, October Term, 1965," *American University Law Review*, Vol. 16 (December 1966), p. 76.
- "Patent Reform Act of 1967," *Journal of the Patent Office Society*, Vol. 49 (March 1967), p. 149.
- Pennella, D. J., "Influence of the Patent System on the U.S. Economy," *Journal of the Patent Office Society*, Vol. 49 (January 1967), p. 52.
- Pigott, Charles F., "The Concepts of Public Use and Sale," *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 399.
- "... it is believed important to examine the present state of the law as to the time when an invention is placed in public use or on sale within the meaning of Section 102 (b) ."
- Pitchenik, D. E., "Suit in the United States Court of Claims for Governmental Infringement—If This Isn't an Effective Remedy—Then What?" *Journal of the Patent Office Society*, Vol. 48 (December 1966), p. 730.
- Pitzer, K. S., "How Much Research?" *Science*, August 18, 1967, p. 779.
- The writer, chemist and president of Rice University, emphasizes university research support as a basis for Ph.D. training. Funding, in this view, should be proportional to the growth of the academic research population and should also include grants for costly equipment, postdoctoral appointments, "and other factors that allow our best scientists to be more productive."
- Pointet, Professor P. J., "The Role of Industrial Property in the Economic Development of States," *Industrial Property, Monthly Review of the United International Bureaux for the Protection of Intellectual Property (BIRPI)*, Vol. 6, No. 3 (March 1967), p. 60.
- "It would not be possible to

speak of the role played by the rights of industrial property in the economic development of countries without first recalling the nature of the different rights and their economic functions, as well as the evolution of industrial property legislation. This will enable account to be taken more readily of the need for the protection of these rights.

"We will next examine tendencies contrary to the protection of industrial property rights, both present and past; then the factual matter of the exchange of technology between countries, and more especially the transfer of technology to developing countries.

"Finally, there will be the question of clarifying the reasons for the importance of adequate protection of industrial property rights in connection with the economic development of countries."

"Prior Art — Knowledge — Disclosures upon Application — Co-Pending Patents," *New York Law Forum*, Vol. 12 (Spring 1966), p. 164.

"Proposed Federal Unfair Competition Statute," *Trademark Reporter*, Vol. 57 (February 1967), p. 87.

"Protection of Sound Recordings Under the Proposed Copyright Revision Bill," *Minnesota Law*

Review, Vol. 51 (March 1967) p. 746.

Pugsley, F. B., and I. A. Calvert, "Patentability of Inventions," *Houston Law Review*, Vol. 4 (Winter 1966), p. 467.

Rich, G. S., "Proposed Patent Legislation: Some Comments," *George Washington Law Review*, Vol. 35 (May 1967), p. 641.

Riess, Daniel M., "The Government Contractor's Protective Umbrella: Authorization and Consent," *Journal of the Patent Office Society*, Vol. 49, No. 2 (February 1967), p. 98.

"What infringing acts by the contractor are covered by the umbrella of immunity of 28 U.S.C. 1498 such that the contractor may refrain from worry about possible liability of suit for infringement? Of course, if the Government is the owner or licensee of the patent there would be no liability under the terms of Sec. 1498 (a). Moreover, if the subject matter of the patent was discovered by a Government employee within the scope of his governmental employment or if the Government employee patentee occupied a position within the Government in which he could influence the use of the invention by the Government, a suit would not lie. Assuming none of the above exceptions are present, it is

paramount to next define when the patented invention 'is used or manufactured by or for the United States' to determine when the contractor is immune from suit for infringement. Also, the presence or absence of an 'authorization or consent' clause must be determined."

Robinson, C., "Letter from Canada," *Trademark Reporter*, Vol. 56 (December 1966), p. 934.

Rolston, G. A., "Some Problems in the Law of Trade Names," *Canadian Bar Journal*, Vol. 9 (November 1966), p. 497.

Roth, David A., and Jerome E. Luecke, "The Misjoinder and Nonjoinder Pitfall," *Journal of the Patent Office Society*, Vol. 49, No. 4 (April 1967), p. 219.

"Errors in either misjoinder or nonjoinder of inventors in patent applications occur frequently. The consequences might be serious. It is the authors' hope that this article concerning both the dangers of invalidating a patent and the potential difficulty in obtaining a patent which may arise from such errors will be useful to their fellow practitioners."

Ruben, Samuel, "Imaginative Thinking, and Opportunities Afforded an Independent Inventor by the American Patent System,"

(Request lecture for the Metropolitan Section of the American Electrochemical Society), *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 442.

"My discussion will be related to the contributions by an independent inventor to the communication industry, particularly electrochemical devices which have helped in the evolution of that industry, stimulated by the recognition and hope fostered by our American patent system."

Rudnick, H. L., and L. Rudnick, "Some Solutions to the Problems of Maintaining Quality Standards, Eliminating Unethical Practices, Supervising Promotions and Ensuring Successful Management of Franchised and Non-Franchised Retail Outlets," *Antitrust Bulletin*, Vol. 11 (May-June 1966), p. 509.

Rudnick, Lewis G., "The *Sealy* Case: The Supreme Court Applies the Per Se Doctrine to a Hybrid Distribution System for Trademarked Bedding Products," *Trademark Reporter*, Vol. 57, No. 7 (July 1967), p. 459.

"... The Supreme Court in *Sealy* has shown no sympathy for the problems attending a distribution system founded on trademark licensing agreements, focusing its inquiry on the licensee ownership of Sealy—which was more historical accident than

preconceived plan—rather than on trademark licensing agreements which the District Court, on the basis of the Government's evidence, believed to be the primary motivation for the territorial restraints. In so doing the Court may well have severely weakened the trademark license as a vehicle for promoting and controlling the distribution of trademarked products. As Sealy argued in its brief, each of its licensees must deal with its own dealer organization. The Court's ruling precludes each Sealy license from selecting and 'franchising,' exclusive or semi-exclusive dealers within the licensee's territory, a highly important marketing technique which remains available to Simmons and other integrated bedding manufacturers with nationwide distribution. The Court's opinion in *Sealy*, must be analysed in conjunction with its opinion in *Schwinn*, combined by the court with *Sealy* for purposes of argument and decision. Though the effect of these decisions on trademark licensing is speculative, it is clear that the doctrine of ancillary restraints is a slender reed, which the Justice Department has managed to bend—but has not broken."

Ruf, Ernst H., "U.S. Patent Concepts v. U.S.S.R. Patent Concepts and Inventors' Certificates—A Comparison of Public Policies

and Social Objectives," *Journal of the Patent Office Society*, Vol. 49, No. 1 (January 1967), p. 16.

"It is the purpose of this term paper, from the viewpoint of comparative law, to briefly examine the public policies and social objectives underlying the U.S. and U.S.S.R. patent concepts."

Shelton, C. L., "Governmental Patent Policy," *Journal of Air, Law and Commerce*, Vol. 33 (Winter 1967), p. 39.

Siegel, Neil B., "Patent Monopoly and Sherman Act Monopolization," *Journal of the Patent Office Society*, Vol. 49, No. 2 (February 1967), p. 80.

"... certain conclusions may be stated with respect to the impact of patents in monopolization cases. First, the mere patent grant or accumulation of patents does not violate the Sherman Act. Patents, however, may influence the court in establishing the existence of monopoly power. Second, in cases where this monopoly power is exercised to the detriment of competition the condemned practices will not be justified in the name of patents. The courts have in borderline situations been hesitant to find antitrust violations where the patentee appears to be pursuing his patent rights without a clear showing of predatory intent."

"Some Special Problems with the

- Utility Requirement in Chemical Patents," *George Washington Law Review*, Vol. 35 (May 1967), p. 809.
- "Subsisting Copyrights and Innocent Infringement," *University of Pennsylvania Law Review*, Vol. 115 (November 1966), p. 129.
- "Symposium—Counseling Mid-Continent Clients Who Trade Abroad"—Foreign Licensing Programs: Their Planning and Formulation, S. Timberg; Antitrust Aspects of Foreign Trade, J. J. Cooper; Legal Problems of the American Importer, F. W. Hess; United States Guaranty Program, L. M. Miller; Taxation of International Business, J. H. Guttenbag; Financing Available to United States Exporters and Investors: Private, Governmental and International, W. S. Surrey; Business Organization in Foreign Trade and Investments, G. W. Haight; Banking and Transportation, M. O'Sullivan—*University of Missouri at Kansas City Law Review*, Vol. 35 (Winter 1967), p.2.
- "Torts—Unfair Competition—Injunction Granted to Prevent One from Using His Surname in Own Business," *Buffalo Law Review*, Vol. 16 (Winter 1967), p. 508.
- "Trademarks—Successful Plaintiffs in Trademark Infringement Actions Under the Lanham Act May Not Recover Attorney's Fees," *Michigan Law Review*, Vol. 65 (January 1967), p. 593.
- "Trade Secrets Law After *Sears and Compco*," *Virginia Law Review*, Vol. 53 (March 1967), p. 356.
- Turner, D. F., "Cooperation Among Competitors," *Northwestern University Law Review*, Vol. 61 (January-February 1967), p. 865.
- Turner, P. E., "Joint Ownership of Patents Is Dynamite," *Los Angeles Bar Bulletin*, Vol. 42 (January 1967), p. 115.
- "Unfair Competition: Appropriation of Trade Secrets Held to Constitute Continuing Tort for Purpose of Statute of Limitations," *Duke Law Journal* (April 1967), p. 450.
- "Unfair Competition Protection After *Sears and Compco*," *Copyright Law Symposium* (ASCAP), Vol. 15 (1967, p. 1.
- "Uniform Deceptive Trade Practices Act," *Commercial Law Review*, Vol. 8 (Fall 1966), p. 123.
- Velvel, L. R., "Critique of *Brenner vs. Manson* (86 Sup. Ct. 1033)," *Journal of the Patent Office Society*, Vol. 49 (January 1967), p. 52.
- Von Holstein, P., "International

- Co-operation in the Field of Patent Law with Special Reference to the Activities of the Council of Europe," *International and Comparative Law Quarterly*, Vol. 16 (January 1967), p. 191.
- Wheeler, S. L., "Recovery for Patent Infringement," *Wisconsin Bar Bulletin*, Vol. 40 (June 1967), p. 30.
- Wood, L. I., "Antitrust vs. Patents," *Record*, Vol. 21 (December 1966), p. 625.
- Wyman, A., "Some Decisions of the C.C.P.A.," *Journal of the Patent Office Society*, Vol. 48 (October 1966), p. 603.
- Zorruguin, E. D. A., "Patentabilidad de Productos Farmaceuticos," *Revista del Colegio Abogados de Puerto Rico*, Vol. 27 (February 1967), p. 271.
- Zuckerman, H., "Nobel Laureates in Science: Patterns of Productivity, Collaboration, and Authorship," *American Sociological Review*, June 1967, p. 391.

Based in part on interviews with 41 of the 55 laureates in the United States. Laureates are generous in co-authorship arrangements. Productivity declines after receipt of the award as roles change. On the whole laureates are and remain highly productive. The prize strains and disrupts collaborative associations.

Reports

- Johnson, D. M., G. R. Parrott and R. P. Stratton, "Productive Thinking: Produce One Solution or Many," *Proceedings of the 75th Annual Convention of the American Psychological Association*, 1967, Vol. 2, Washington, DC: The Association, 1967, p. 299.
- "If we want to improve thinking, the best procedure . . . seems to be to try to improve utilization of the solutions after they have been produced." The encouragement of the production of many, rather than single solutions leads to great variability in quality . . . but it also yields a greater supply of worthwhile alternatives. The average rating of single solutions turns out to be higher than for multiple solutions, but not by very much.
- McDonald, M. B., Jr., *Appraising the Market for New Industrial Products*, National Industrial Conference Board, 1967. 112 pp. \$17.50, (\$3.50 for associates)
- The four chapters deal with pretest of new product ideas, estimation of market potential and pretest of products and markets.
- National Patterns of R&D Resources: Funds and Manpower in*

the United States, 1953-68, National Science Foundation, Washington, D. C.: Government Printing Office, 1967. 26 pp. \$0.30.

Science and Engineering Staff in Universities and Colleges, 1965-75, National Science Foundation, Washington, D. C.: Government Printing Office, 1967. 25 pp. \$0.30.

Technology and World Trade: Proceedings of a Symposium, November 16-17, 1966, Washington, D. C.: U.S. Department of Commerce, 1967. 162 pp.

"Toward the Year 2000: Work in Progress," *Daedalus*, Summer 1967, \$2.50.

The entire issue is devoted to papers and discussion sponsored by the American Academy of Arts and Science's "Commission on the Year 2000." The funds for the Commission's establishment were provided by the Carnegie Corporation. Among other topics, the volume deals with the technological outlook and the nature and limitations of forecasting.

Includes eleven principal addresses plus formal discussion, questions, and comments. The second day's papers relate to technological development and application with government sponsorship and to the role of enterprises in international technological transfer.

Donald L. Brown Memorial Fund Established

The PTC Research Institute has established the Donald L. Brown Memorial Fund to honor the memory of the late Donald L. Brown. The memorial fund was announced by the Polaroid Corporation at a ceremony held in Cambridge, Massachusetts on August 9, 1967, at which Mrs. Donald L. Brown presented a check for the initial contribution to Mr. Earl P. Stevenson, Chairman of the Institute's Advisory Council. A former member of the Institute's Advisory Council, Mr. Brown had served as Vice President, Patent Counsel and member of the Board of Directors of the Polaroid Corporation since its inception.

Mr. Brown was a highly regarded specialist in the field of governmental relationships with business. He had been greatly interested in the Institute's work and had been a very active member of its Advisory Council. The memorial fund will be used for the remuneration of a full-time Senior Investigator or toward the support of a part-time investigator for research related to patents and trademarks.

The establishment of the Donald L. Brown Memorial Fund is made possible by a grant from the Polaroid Corporation of the sum of \$25,000 over a period of three years.

Nominations for 1967 Inventor of the Year Award Invited

Nominations for the 1967 Inventor of the Year Award are invited by The PTC Research Institute. Closing date for the nominations has been extended to December 15, 1967. Members of the Research Institute and all other interested persons are asked to submit the names of candidates for consideration by the Awards Board. Submissions should include information to clearly identify the candidate and contain sufficient evidence of his *character* and *contributions* to enable the Board to make an evaluation.

The Inventor of the Year Award honors a journeyman or professional inventor who has made a significant patented invention or inventions even though he may not have had wide public notice. Presented annually, the Award reaffirms the Research Institute's continuing special interest in the accomplishments of creative people by providing a university forum for recognition.

The Award program is not necessarily intended to honor the great invention. It affords an opportunity to recognize a relatively un-

known dedicated inventor who overcomes obstacles and expends his resources to produce an invention or inventions. The Award is not limited to an inventor's contribution in any one year but will be given for any or all of his achievements to date. Chester F. Carlson was named Inventor of the Year for 1964, Samuel Ruben for 1965, and Gordon K. Teal for 1966.

Davidson Wins Society Student Award

Robert M. Davidson of Washington, D.C., is the recipient of this year's Patent Office Society Student Award for his paper entitled, "The Constitutionality of the First-to-File System." The Award paper was submitted in partial fulfillment of the requirements for the Research Institute's 1967 Seminar

and Lecture Series. It appears in the Student Papers section of this issue of *IDEA*.

A citation from the Institute and an honorarium contributed by the Society, will be presented to Mr. Davidson at a ceremony to be held during November.

The Institute Moves to the New Joseph Henry Building

The PTC Research Institute has moved to the newly completed Joseph Henry Building on the campus of The George Washington University.

This new building named in honor of the first Secretary of the Smithsonian Institution will also house the National Academy of

Sciences. The new quarters will provide much needed additional space for Institute operations. Location in a Science Building of the University will also offer unusual opportunity for the cross fertilization of ideas with other members of the scientific community.

Notes on Informed European Opinion Regarding Industrial Property—Summer 1967

L. JAMES HARRIS*

OCCASION

This past summer I personally collected material on the experience of European experts under provisions of laws that already largely embody the Recommendations of the Report of the President's Commission on the United States Patent System.¹ My purpose in this article is to present a brief account of my impressions concerning the European industrial property "climate," particularly with respect to harmonization and regional and international industrial property arrangements. A later, more formal, report will deal in detail with the

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¹ *Report of the President's Commission on the Patent System*, (Washington, D.C.: G.P.O., November 17, 1966).

implications of Recommendation 35² and of other Recommendations covered in my conversations abroad.³

In a sense, this note constitutes a by-product of one of the studies⁴ that The PTC Research Institute has undertaken on the Report of the President's Commission on the United States Patent System. The purpose of the Institute studies is to reveal, insofar as possible, the potential effects of the changes proposed by the Commission on innovation and economic progress. The Institute studies are being conducted by means of depth interview, questionnaire, and literature search. My own assignment was to interview foreign participants in the Workshop on Industrial and Intellectual Property that I had been asked to organize and moderate at the World Peace Through Law Conference in Geneva in July 1967. I took further advantage of my trip abroad, to interview in depth many government officials, private practitioners, and business executives in Switzerland, Germany, Denmark, France and the Netherlands.⁵

HARMONIZATION: COMPETING AND CORRELATIVE OBJECTIVES

My encounters with experts in industrial property and with other European industrial and professional leaders suggest that Europe is

² Recommendation 35 states that: "The Commission believes that the ultimate goal in the protection of inventions should be the establishment of a universal patent, respected throughout the world, issued in the light of, and inventive over, all of the prior art of the world, and obtained quickly and inexpensively on a single application, but only in return for a genuine contribution to the progress of the useful arts.

"To this end the Commission specifically recommends the pursuit of: (1) international harmonization of patent practice, (2) the formation of regional patent system groups, and (3) a universal network of mechanized information storage and retrieval systems." See *supra* note 1, at p. 55.

³ I discussed the following topics with foreign experts: First to File; Grace Period; Opposition and Cancellation; Interpretation of Claims and Effectiveness of Examination System; Novelty and Obviousness; Deferred Examination; Preliminary Applications; Protection against Importation; Early Publication of Patent Application; Foreign Public Knowledge, Use and Sale Included As Prior Art; Advisory Council; Burden of Persuasion; Damages for Infringement before Patent Issues; and Patent Office Finance.

⁴ See "Institute Research Bearing on Report of President's Commission on the Patent System," *PTC News Notes*, Ref. 709 (March 1967). Also see *IDEA*, Vol. 11 Conference Number (1967).

⁵ On several occasions I interviewed two and three experts representing different disciplines at one time. Happily, in all these multi-party interviews the effect on the discussions was synergistic.

prepared to accept a greater degree of legal, technological, and economic harmonization and integration than at any other time since World War II. But there is also evidence of ambivalence. There is an underlying reluctance, distrust, or drag, particularly where a closer rapport may logically require political integration. While Europeans strive for more concord, they remain animated by keen economic and political competition. Their history cannot be shed, and they literally cling to the sovereignty of the present and past as they look to the future.

When I raised the question of international patent cooperation, the responses were generally favorable. However, further discussion disclosed doubts, particularly as the exploration extended to other questions. At deeper levels, it became certain that the kind of cooperation that the experts deemed acceptable was also strictly circumscribed.

Frequently, I asked: "For the purposes of international cooperation, do you think it is essential that there be substantially identical patent laws? If so, why?" In every case I stressed the word "essential" and the phrase "substantially identical." I also made it a point to explain that their responses would be evaluated in accordance with this emphasis.

Most of the respondents thought that harmonization of patent laws would be helpful, if not essential, to international cooperation. But, in almost every case, the reply was carefully hedged; that is, harmonization was usually considered essential for certain types of provisions only. Thus, the impression was conveyed that harmonization was deemed feasible precisely because it required a limited amount of legal and political change. Several of the interviewees seemed to have some kind of international arrangement in view as the goal. This impression was most strongly conveyed in Germany; it also emerged from discussions in France, Denmark, and the Netherlands.

Let me cite a few examples: A highly placed official of the German government stated that "substantially identical patent laws are needed," but went on to explain that he was referring to laws relating to the patentability of invention. Indeed, he felt that it was "not necessary that the procedural requirements be the same in different countries." A representative from German industry repeated this position in almost the same language. He stated that "patentability, including utility, novelty, and inventive height, should be substantially identical although procedural laws may differ." Another response from a German government employee was focused on "search results from the various industrial countries." He thought that, to assure similar results, "certain procedures should be instituted on a step-by-step

basis." The first step he advocated involved patent documentation: "The prior art should be classified in the same way in the various countries." The second step "should bring the patent application form, including the claims, into conformity in those countries."

In France, a well-informed government official responded in terms that recalled my experience with German interviewees. He favored "substantially identical patent laws relating to patentability, such as novelty, inventive step and subject matter." He, too, thought it "not essential that patent laws be identical for that part of the law relating to procedures after the patent is granted."

In Denmark, an industry executive expressed the limitation another way. He said that: "With respect to certain patent provisions, substantial identity would be essential. For example, registration versus examination, first-to-invent versus first-to-file."

In the Netherlands, a quasi-government official also hedged while seeming to assert a broader basis of commonality. For the purposes of novelty-searching, he felt that it was "not essential that there be substantially identical patent laws to achieve international cooperation." He added, however, that "a common definition of novelty would be extremely important." Referring to "inventive height," he stated that "substantially identical patent laws are not essential because its presence or absence is a subjective determination." But it was also his belief that achievement of real uniformity with respect to patentability would require "a supranational court that would have jurisdiction over all the national courts dealing with patents in the participating countries, and to which their respective decisions can be appealed."

Several of the experts responded to my query by referring to regional arrangements. For example, several Danes directed their remarks to the proposed Nordic Patent Convention,⁶ while some

⁶ ". . . there has been a somewhat surprising development in the Scandinavian countries. For many years a Nordic Patent Convention has been proposed and discussed. In the last few months it has suddenly come to active life under Swedish leadership.

"Essentially this involves the enactment of substantially identical patent laws in Sweden, Norway and Denmark and probably Finland, and a treaty between these countries whereby an application filed and granted in any one of them could also be automatically issued in some or all of the others, at the request of the patentee.

"This would be an open Convention available to nationals of any country. It is believed that there are no important political objections, and the Nordic Convention may possibly be in effect before the end of the present decade. In view of the existing similarities in practice and language among the Scandinavian countries, this is actually in the nature of harmonization rather than a supranational system." Leonard J. Robbins, *IDEA*, Vol. 8 Conference Number (1964), pp. 107-108.

French experts cited the proposed draft Common Market Patent Convention.⁷ Since the BIRPI⁸ meeting in Copenhagen on the proposed PCT Treaty⁹ had occurred at about the time of my European trip, it too was cited. In general, each such respondent considered his country not yet ready to enter into a regional patent arrangement, although it might well be or become a member of a group for other purposes. Thus, the position on group patent integration seemed far less advanced than the position on patent harmonization or on some form of international negotiation. Further implications of the responses bearing on regional arrangements will be considered in the next section of this paper.

Another question on international cooperation that I asked the foreign experts was this: "Is it necessary to have a first-to-file procedure if a country is to participate in BIRPI's proposed PCT Treaty?" The answers to this question (which was intended to elicit information concerning harmonization, international arrangements, and the European attitude toward an important element of American patent practice) were generally negative. In almost every case, the two parts of the Treaty were treated discretely—as well as discreetly. There was much support for the first part of the Treaty relating to the novelty report, but little, if any, for the certificate of patentability. The replies to this question reinforced my impression that great store is placed by cooperation, particularly harmonization and international instruments; and that, at the same time, domestic interests were deemed paramount.

A French expert from industry stressed that, for the purposes of

⁷ For a comprehensive paper on the Convention, see Franz Froschmaier, "Progress Toward the Proposed Convention for a European Patent and for a European Trademark," *IDEA*, Vol. 6, No. 4 (Winter 1962-1963), p. 479.

⁸ Bureaux Internationaux Réunis pour la Protection de la Propriété Intellectuelle, the Secretariat of the Paris and Berne Unions, is located in Geneva, Switzerland.

⁹ See "BIRPI Plan for Facilitating the Filing and Examination of Applications for the Protection of the Same Invention in a Number of Countries," *Industrial Property*, (March 1967).

On May 31, 1967, BIRPI released a draft of a proposed Patent Cooperation Treaty "as a result of a proposal made by the United States to the Executive Committee of the Paris Union." Thereafter, during the spring and summer of this year, a number of briefing conferences were held in different cities in the U. S. under the auspices of the Patent Office, U. S. Department of Commerce.

For an expert appraisal of the proposed Treaty, see Gerald D. O'Brien, "A Realistic Appraisal of the Draft Patent Cooperation Treaty;" for a constructive counter-proposal see Stephen P. Ladas "The BIRPI Plan for a Patent Cooperation Treaty," *IDEA*, Vol. 11, No. 2 (Summer 1967), p. 159, p. 179.

BIRPI's certificate of patentability, it was essential that the patent laws (which are in reality an expression of national sovereignty) first be made substantially identical. In his view, "such a certificate of patentability is not feasible until the laws of the participating countries are harmonized."

A German university professor counseled that the first phase of the BIRPI Treaty was "essential to avoid double work." On the other hand, he believed that the second phase was "not realistic."

I should cite some of the thought-provoking comments made on the first part of the Treaty. According to a well-known French patent agent, all participants would have to accept a first-to-file procedure if they were to participate in the proposed BIRPI Treaty. Although he was favorably disposed toward the Treaty proposal relating to a novelty report, he voiced four objections from a "practical standpoint." Specifically, "(1) in order to determine whether patents had defense implications, it would be necessary to compel applicants to file first in their national patent offices; (2) the intervention of an agency like BIRPI would further complicate patent application proceedings; (3) the organization of the examination proposed by BIRPI would be impossible because of the current lack of uniformity; and (4) there might also be problems with the application of the International Convention."^{9a}

A government official in the Netherlands thought that the proposed BIRPI Treaty would represent an improvement in international cooperation precisely *because* it would lead to increased collaboration between parties operating under a first-to-file system and parties operating under a first-to-invent system. This view struck me as thoughtfully different. He noted, however, that "the BIRPI Treaty would be much easier to realize if all the countries had a first-to-file procedure."

In short, the viewpoints expressed by the respondents indicate a uniformly favorable opinion on harmonization and on international cooperation, but not on group arrangements involving integration. Even when the need for harmonization was expressed as a necessary prelude to group or international patent arrangements, no conviction was communicated for a full and vigorous group integration, nor was there any optimism that integration would be realized within the near future. Lack of uniformity of patent laws was considered by some respondents to be responsible for the lack of progress in group patent

^{9a} Paris Convention for the Protection of Industrial Property of 1883, revised at Brussels 1900, at Washington 1911, at The Hague 1925, at London 1934, at Lisbon 1958, and at Stockholm 1967.

arrangements. On closer examination, however, the responses revealed a surprising lack of enthusiasm for such arrangements any way. Support for group arrangements was even more limited among the French experts than among the experts interviewed from other countries.

HALTING PROGRESS TOWARD REGIONAL ARRANGEMENTS

I made a special effort to obtain information on attitudes of experts toward patent arrangements within regional groupings of nations. The responses were "unofficial"; but, again, deeper considerations seemed to influence the disposition to reply and the quality of the information given. The opinions on integration, as I mentioned in the previous section, were generally consistent with their points of view concerning harmonization and other varieties of international cooperation.

The respondents recognized industrial property as an important avenue by which regional groups may pursue economic and technological integration. Nevertheless, the expressed objections to integration were often unequivocal. Clear overtones of doubt were heard even in otherwise favorable observations on the state of integration. The attitude toward integration is very different from that toward harmonization or international treaties; and, moreover, the inter-country variation in this attitude toward group patent arrangements was much less than I had anticipated.

An eminent Danish patent agent informed me that the political parties in Denmark and Norway raised national sovereignty and other objections to Nordic patent legislation after the government representatives of various Scandinavian countries had agreed and after the patent agents in these countries had been consulted. He said that "there is a very strong likelihood that the new Danish law will be passed with Chapter III eliminated—or made effective at some future date."¹⁰ Chapter III of the new Danish law is the chapter that provides for Nordic cooperation. It is apparently feared that applicants will tend to apply to the patent office of the country considered most liberal, and that a lack of uniformity is implicit in the failure to provide for a common Appeals Board or Court.

Contrary Danish sentiment was also encountered. A government official expressed belief that a Nordic patent was getting closer than

¹⁰ As this paper went to press I received a letter from a Swedish patent attorney informing me that the new Swedish patent law was enacted by the Swedish Parliament on November 1, 1967, to take effect January 1, 1968. He writes that "... the special Rules regarding 'Nordic' patent applications which will mature into patents in all the four Nordic countries—Sweden, Denmark, Norway and Finland—will only come into force later on."

ever, and he even hoped "that Danes will be able to put the Nordic patent into effect."

In France, the Strasbourg Convention¹¹ was favorably mentioned by a high government official and a leading patent agent. However, the agent stated that it would be impossible to obtain identical patent laws. But harmonization had to take place and provision for examination of patents made in the national patent laws of the six countries involved for a common EEC patent to become possible.¹² In his opinion, such a patent will not be instituted for a long time to come. Moreover, he felt that the EEC common patent proposal implies an overcomplicated system. He amplified as follows: "An infringement action must first be brought in the national court. If invalidation of a patent is determined, the proceedings in the national court must come to a halt and an action must be brought in the European court to determine the validity of the patent. Only after the action of the European court has been concluded and a determination made can the national court proceed with the action that was originally instituted therein."

Another well-known French patent agent did not think substantially identical patent laws essential for international cooperation. He gave the very revealing reason that "national judges are unimpressed by what happens in other countries."

In only one of my interviews abroad was a clear and spontaneous sentiment expressed in favor of regional patent arrangements. In response to my inquiry on the necessity for a first-to-file procedure for participating in the proposed BIRPI Treaty, a German university professor expressed doubts as to the practicability of the second phase of the Treaty. In this connection, he stated a preference for "regional arrangements such as those proposed for the Scandinavian countries and for the Common Market countries."

In general, I experienced more support for regional integration in Germany than in France. Although a Common Market patent was not

¹¹ "Harmonization has also just won a quiet victory in the countries belonging to the Council of Europe—which include the six Common Market countries. There are already two existing minor Conventions relating to classification and formalities. A new Convention has been signed dealing with harmonization of several important substantive aspects of patent law, particularly relating to novelty and patentability. While no one could say this makes the German and French systems similar, at any rate it does bring them closer together." See *supra* note 6, at p. 108.

¹² ". . . it should be remembered that many proponents of the European Patent Convention, while approving in principle, have stated that harmonization of national patent laws must come first." See *supra* note 6, at p. 108.

often mentioned even in Germany, I nevertheless got the impression that the Germans would encourage agreements leading to greater group cohesion. Apparently, the integration sought by the Germans is based primarily on nationalism, or self-interest: it involves the political unification of Germany, a goal that has wide support.

Discussions of the different modes of economic and legal integration available made it clear to me that the Germans are anxious for the Common Market to be made attractive. The industrial property potential is recognized. If the Eastern European nations could be included, particularly East Germany, eventual political unification of the two Germanies would be easier. On becoming aware of the deeper implications of the West German attitude, I also acquired an insight into the changing policies of De Gaulle—toward the Common Market, the independence for the Poles, and the separation of the French Canadians. The admission of countries like England to the EEC, and any further steps to advance integration in the Market, would encourage extension to other European countries and thus facilitate the eventual unification of Germany. De Gaulle anticipates that Germany would assume the leading role in the EEC, perhaps in all of Europe.

IMPLICATIONS FOR U. S. INDUSTRIAL PROPERTY POLICY

The theme of the Workshop on Industrial and Intellectual Property at the World Peace Through Law Conference in Geneva which I moderated was "the improvement of the international role of industrial property with a view to transferring technology to developing countries as a means of accelerating their economic growth." If patent protection could induce investment in, and transfer of, technology to less industrialized nations, these nations could presumably achieve a higher material standard of living and a greater degree of economic development. Greater tangible wealth might make nations less inclined to take military risks, and the cause of world peace would accordingly be promoted.

The transfer of technological information was, indeed, uppermost in the minds of the representatives from the less developed nations to the Geneva Conference. The representatives of the industrialized nations to the Conference were sympathetic, of course, but their interest seemed to center on the development of international trade, the problems of world peace, and the ethical obligations of the "have" nations to provide for the "have-not" nations. The last consideration

was, as might be expected, most evident in the talk of American representatives.

In the interviews I conducted after leaving Geneva, I did not find as much interest as I had anticipated in the transfer of technological information from the highly developed to the lesser developed nations. I had somehow expected that a U.N. resolution¹³ and subsequent report¹⁴ on the subject would have a greater impact than they did. Perhaps, the dominant economic position of the United States is encouraging other nations to feel less concerned with the technological welfare of the less developed nations. Another possible explanation is the belief in an R&D "gap."¹⁵ Since we allegedly are so far ahead of the Europeans in our research and development, it may be believed that we can afford better than anyone to dispense technological largess.

Despite the lack of emphasis on transfer, the subject was never minimized, and was sometimes mentioned by interviewees. For example, when I asked a Dutch executive in a quasi-government position for his opinion of the proposed BIRPI Treaty, he added, after responding comprehensively, that, "for the underdeveloped nations, it

¹³ "In 1961, in the General Assembly of the United Nations, a draft resolution originating with the Brazilian delegation, was presented demanding an investigation of the role of patents in the transfer of technology to underdeveloped countries.

"The original wording almost implied condemnation, but was toned down, as a result of well reasoned criticism by a number of interested organizations. The final resolution, dated December 19, 1961 directed the Secretary General to make a broad study of patents, and in particular the effect of patents granted to foreigners on the economy of underdeveloped nations." See *supra* note 6, p. 109.

¹⁴ *The Role of Patents in the Transfer of Technology to Developing Countries*, (Annes E): U.N. Publication 65 II BI (1964).

"The resulting U. S. Report has now been issued, dated February 14, 1964. It is fair, objective, and is based not only on theoretical research, but on an extensive questionnaire sent to over fifty countries and many interested organizations. It is well worth reading for itself, and as a sample of U.N. activity. It establishes factually and conclusively that there is an unbalanced distribution of capital, technological skills and managerial skills between the developed and underdeveloped countries.

"The conclusion is that the grant of patents to foreigners in the underdeveloped countries is actually a factor for the correction rather than the creation of this unbalance." See *supra* note 6, at p. 109.

¹⁵ Smith Hempstone, a European correspondent of *The Washington Star*, reported that British Prime Minister, Harold Wilson, in a speech delivered at the Lord Mayor's banquet in London's Guild Hall on November 13, 1967, stated that (in Mr. Hempstone's words) "the technology gap between Europe and the United States . . . is 'ominously widening' year by year and if allowed to continue would leave Europeans as 'hewers of wood and drawers of water'," *The Evening Star*, November 14, 1967.

might be wise to institute a cheap, practical system attuned to their simple needs for the next 25 years."

We should not overlook the fact that the industrial property laws of various European countries already have striking similarities.¹⁶ Furthermore, an organized effort is being directed toward the reworking of such laws within the context of trading blocks.¹⁷ Indeed, the countries of Europe seem to be engaged in harmonization on a European basis.¹⁸ The commonalities which already exist in the industrial property laws of these countries portend a successful outcome of the harmonization process. References by interviewees to new laws enacted and to other laws being enacted or still contemplated evidenced satisfaction with action toward harmonization. The reworking of the laws of the cooperative economic groups, on the other hand, did not seem to signify for the respondents any early successful achievement of a common multi-national framework for industrial property. The current interest in patent cooperation seems pan-European,¹⁹ or even more broadly international.

The Netherlands law granting patents under a deferred examination procedure went into effect on January 1, 1964,²⁰ and a new law including a deferred procedure will shortly go into effect in Germany.²¹ There, a major revision—which may take a number of years to complete—is under consideration in connection with the contemplated

¹⁶ Although two basically unlike systems are operating in Western Europe today, certain provisions appear more or less similar, (e.g. provisions relating to first-to-file procedure, grace period [derived from inventor or invention], applicants entitled to apply, cancellation proceedings, renewal fees, and licensing or compulsory working).

¹⁷ For example, proposed European Patent Convention, Nordic Patent Convention, European Free Trade Association Patent Convention.

¹⁸ Witness the Conventions of the Council of Europe relating to: (1) formalities required for patent application, (2) international classification of patents for invention and (3) unification of certain points of substantive law on patents for invention.

¹⁹ ". . . Wilson called on the continental nations to create with Britain 'a collective European technology,'

"He emphasized that his proposals were separate from but not a substitute for, British membership in the Common Market, . . ." Smith Hempstone, see *supra* note 15.

²⁰ A report on deferred examination in operation is made by the head of the Dutch Patent Office in "Industrial Property Relations with Industrialized Nations: The Deferred Examination System," C. J. de Haan, *IDEA*, Vol. 9, Conference Number (1965), p. 227.

²¹ For background information on the new German law, see: Dr. Gerd Hiete and Dipl. Ing. Anton Huber, "Vorschläge der Prüfer des Deutschen Patentamts und der Richter des Bundespatentgerichts zur Neuregelung des Patenterteilungsverfahrens," *Mitteilungen der deutschen Patentanwälte*, Vol. 57, No. 6 (June 1966), p. 105.

"great German patent law reform." The French contemplate extending their unique examination system to all technical fields;²² and Denmark will very probably amend its patent laws to conform with those of the draft Nordic Patent Convention, except for Chapter III as previously mentioned. The inevitable accommodation between the industrial property laws of Europe, as they emerge from their current state of flux, was pointed up by a representative of Danish industry, who explained that the "grace period in the Nordic patent stems from the grace period in the EEC proposed patent law."²³ He added that, although there is no grace period in the present Danish law,²⁴ the new Danish patent bill includes a six-month grace period if the invention is derived from the applicant in bad faith (a similar period is provided under German law).²⁵ In referring to the proposal for absolute novelty under the new Danish law, he also pointed out that a provision for absolute novelty is presently part of the French patent law.

A French government official went even further with respect to novelty. He stated that "the Strasbourg Convention incorporates absolute novelty; and, if the countries are to cooperate, they must all have provision for absolute novelty in their laws."²⁶

An appreciation of the strength of the tide running in favor of harmonization can be obtained from the enactment of deferred examination laws in certain countries and from the imminence of such laws elsewhere despite formidable opposition. Thus, the deferred examination system took root in the Netherlands notwithstanding opposition

²² Bill No. 244, on the reform of the French Patent Law, was introduced in the French National Assembly in the Spring of 1967.

²³ "The interesting thing is that the final proposals [for the Nordic Patent Convention] were made after very careful study of the draft European Patent Convention and consultation with the officials of the Common Market Commission in Brussels. Certain of the proposals in the European Patent Convention have been incorporated." See *supra* note 6, at p. 108.

²⁴ The Danish Patent Act of 1st September, 1936, with Amendments, Latest by Act No. 508 of 20th December, 1950, English translation published by The Comptroller of Patents, Copenhagen (1951).

²⁵ This is a narrower and shorter type of grace period than the period provided under U. S. law, which extends for a year and also covers third party disclosures.

²⁶ In discussing the recommendation for absolute novelty in the Report of the Presidential Commission on the U. S. Patent System, a highly regarded American expert on foreign patent law points out that "the extension of prior art to include public use anywhere in the world does not harmonize with the laws of Great Britain or any of the British Commonwealth countries, West Germany, Japan and Canada but does correspond to the definition of prior art in the unratified 'Substantive Patent Law Convention' of the Council of Europe, the proposed Nordic Patent Convention, and the ill-fated draft Common Market Patent Convention." S. Delvalle Goldsmith, "The United States Patent System: Has It come to the End of the Line?," *IDEA*, Vol. 11, No. 3 (Fall 1967), p. 333.

from many highly regarded individuals.²⁷ Likewise, it will become the law in Germany over the opposition of a majority of German patent examiners and patent attorneys and many industrialists. In the words of a German government official, "some support for the new law came from industry and the Patent Office, but the major sponsor was the Ministry of Justice." There also appears to be opposition to the deferred examination in France.

A French patent attorney confided to me that "a deferred examination system would not be introduced in France." He was convinced that, for France, "one likely alternative would entail the immediate examination of the patent application; and another would allow the patent application to be issued without any examination at all."

A representative of French industry thought differently. He considered a deferred examination system likely, although he was unhappy about the prospect: "Deferred examination is not a good system. It keeps all parties uncertain of their rights for too long."

In Denmark, I learned from an industry representative that the deferred examination system "was discussed in the Danish Parliament as a substitute for a Nordic patent system (to which the Danes are opposed). Danish industry particularly prefers deferred examination to the Nordic patent." A Danish patent agent supported deferred examination on economic grounds. He stated that: "Deferred examination would relieve the Patent Office from wasting time and effort on inventions that may prove to be without practical purpose. Eighty percent of the applications in the Danish Patent Office are of foreign origin, and probably already have had the benefit of a novelty search in the patent offices of countries from which they came."

What message emerges for American industrial property policy from the foregoing brief discussion? Greater European harmonization and an increase in international arrangements²⁸ are inevitable, and

²⁷ "Mr. Chairman, I know I am not unbiased, because before the new Dutch law was introduced I wrote an article in which I argued that the system would be a complete failure on account of the fact that Dutch inventors would request the novelty search immediately in order to determine whether it would be appropriate to file the same patent application abroad, whereas foreign applicants would have already made up their mind to this effect and would only file patent applications in Holland to obtain a patent, but would not be interested in having their patent applications pending. I must admit I was wrong and that the new system gives more than the expected savings. Like any new convert I am perhaps fanatical, but this has the advantage that you did find a convinced defender of the system for giving this talk to you." Unpublished talk given by C. M. R. Davidson on November 3, 1967, before the Institute of Patent Agents in Canada.

²⁸ For a recently published paper on current international patent problems and proposed international solutions, see Gerald O'Brien, *supra* note 9.

we have much to gain from such cooperation. Although there is general awareness of American law and even admiration for parts of it in certain European quarters, the changes in European patent provisions are not likely to use our model. One of the obvious major reasons for this involution of patent law is that European countries face similar problems. A striking manifestation of this similarity is to be found in domestic-foreign distribution of patent applications processed by European patent offices,—practically the reverse of the ratios which prevail in the United States.²⁹ Furthermore, European languages, attitudes, customs, traditions, institutions, and legal and social systems differ despite many “Western” commonalities; and Europeans must compete with each other in a relatively small geographic area.

This European quest for further harmonization extends even to the point of radical alteration of examination systems. Deferred examination is being commonly embraced by patent offices abroad as the solution to the influx of applications—which, in large part, are of foreign origin. Although this solution is not universally admired, it has caught the fancy of some³⁰ and is reluctantly acknowledged by others as the lesser of two evils. The Dutch, not yet entirely certain, are nevertheless advertising the effectiveness of the deferred examination solution.³¹ Curiously, a strong interest in harmonization was reflected in the reference by several experts to the “Substantive Patent Law Convention” of the Council of Europe, which has not yet been ratified by all the member countries. This interest also seems intimately associated with attitudes toward the proposed BIRPI PCT Treaty, supported only in part, however, by the interviewees. Indeed, some felt harmonization had to precede the Treaty; others felt that the Treaty would make for more harmonization; still others felt that

²⁹ In this connection the reader may find of interest a paper comparing the inventiveness of nations by means of the relative proportion of domestic patented inventions also patented in other countries. See Barkev S. Sanders, “American Inventiveness,” *IDEA*, Vol. 5, No. 2 (Summer 1961), p. 114.

³⁰ See proposal on deferred examination in Leonard J. Robbins paper “Reform of the U. S. Patent Law and the Proposed Patent Cooperation Treaty,” prepared for the FICPI meeting in Cannes in February, 1967.

Also see John Robert Duncan, “The European Patent Convention as a Guide to Modernizing Our Patent Examining System,” *IDEA*, Vol. 8, No. 3 (Fall 1964), p. 405.

³¹ “Results of the Netherlands Procedure for Granting Patents with Deferred Examination,” unpublished paper by J. B. van Benthem, October 3, 1967; C. J. de Haan, “Industrial Property Relations with Industrialized Nations: Deferred Examination System,” *IDEA*, Vol. 9, Conference Number (1965) p. 227; “Experiences with the New Dutch Patent Law,” unpublished talk given by C. M. R. Davidson see *supra* note 27.

harmonization should somehow replace the Treaty.³²

Whatever the future of group arrangements, such as the proposed Common Market Patent Convention or the proposed Nordic Patent Convention, their emergence has had a definite impact on the European countries. Lack of vigorous support for these proposed group compacts (even though certain changes in domestic legislation originating from group patent proposals is favored) has, perhaps, resulted in more favorable action toward other modes of cooperation, such as harmonization.³³ Harmonization, like other international accords, appears to have a special fascination for the Europeans, but group arrangements cannot yet be counted out.

CONCLUSIONS

I am impressed that the industrial property policies of European nations are being pursued with a clear understanding of national purpose. We, too, should promote an understanding of our national objectives and pursue them consistently in international industrial property transactions. An ill-defined feeling has taken hold in certain quarters that our system somehow is out of step with other systems almost everywhere, that this lack of rapport is having an inhibiting effect on our international dealings. Is this notion exaggerated by the vigor of our energetic debates? Are the seeming advantages of European patent provisions due at least in part to the paternalistic nature of European governments? How would such provisions actually stand up in our more open, pluralistic society? More important, can our own objectives be consistently pursued, given the peculiarities of our own democratic institutions?

Despite limited public appreciation of the fact, the United States already constitutes a highly advanced "common market."³⁴ Maybe, attention has not been directed toward the United States as such a

³² For alternate plans to the BIRPI PCT Treaty, see Stephen P. Ladas, *supra* note 9; Leonard J. Robbins, *supra* note 30; and the Patent Cooperation Treaty (Alternative Draft) dated September 20, 1967, prepared for the National Association of Manufacturers and presented by William R. Woodward at the Conference on International Patent Cooperation Treaty sponsored by The Federal Bar Association and The Bureau of National Affairs, September 20, 21, 1967.

³³ In discussing this point a colleague remarked: "In spite of all the talk about harmonization, the actual substantive changes in European patent laws that have gone into effect in the last decade or so, have really been of a very minor character. That is, most of the long established national 'flavor' still exists."

³⁴ See L. James Harris, "The First Modern Common Market: A Reinterpretation of the (British) Commonwealth," *IDEA*, Vol. 6, No. 2 (Summer 1962), p. 199.

market because it has always been one; because, being so much a part of our life, it is accepted as a matter of course. In contrast, the accomplishment of the EEC represented such a decisive break with a past of intense nationalistic and military rivalry that it shocked the world into a new attitude of respect.

My examination leads me to believe that we may not be appreciating our actual performance. We may be trying now to discard our experience and our historical advantage in vain pursuit of other systems developed under another sky and rooted in another soil. Thus, if we once again bring our situation into focus, we may find that we have the only group industrial property system that is operating, and that we should remain different from other nations to meet our continuing peculiar needs. Indeed, our group patent system began^{34a} and developed during a long period of ascent to, and maintenance of, technological dominance. Other countries that excel in particular branches of technology, nevertheless envy the scope and depth of U. S. superiority.³⁵

In an earlier paper, I wrote: ". . . when the time comes for direct confrontation by the United States with the EEC, we might consider reciprocity of the U. S. Common Market with that of EEC, supported by a common political sympathy and cultural background. It behooves the free world to develop arrangements among the large trading blocs it comprises which maintain them in their full vigor and which are compatible with their long range interests and common objectives."³⁶ The potential of our group patent system has amply been demonstrated; and much is to be gained by all from the reciprocal exchange of ideas and goods.

We should not reject opportunities to harmonize our laws with those of other nations and to enter into agreements that are in the *national* as well as in the international interest. Specifically, we should deal on more even terms, and even enhance our competitiveness, with other

^{34a} For a recently published scholarly treatise on early American patent history see Bruce W. Bugbee, *The Genesis of American Patent and Copyright Law* (Washington, D.C.: Public Affairs Press, 1967) 208 pp. \$6.

³⁵ ". . . the widening technology gap between the United States and Europe are sore points in all continental countries.

"European dependence on American scientific advances is illustrated by the fact that Europe pays five times as much for the use of U. S. patents as America pays for European patents." Smith Hempstone, see *supra* note 15.

³⁶ L. James Harris, see *supra* note 34 at p. 223.

countries. Guilt over our achievement of technological and industrial supremacy, over our continuing benefit from a so-called "brain-drain,"³⁷ is needless. In our relations with our own states, we have developed national systems of law, including our patent system, and we have developed skills of diplomacy. This experience and the instruments we have shaped should facilitate international harmonization and the fashioning of international arrangements relating to industrial property. While accepting foreign patent ideas of common advantage, we need not concede initiative or the upper hand to other states.

³⁷ "Scientific Brain Drain to U. S. Alarms Bonn," *The Evening Star*, November 16, 1967, p. A, 21.

The Relationship Between the Berne Convention and the Universal Copyright Convention

Historical Background and Development of Article XVII of the U. C. C. and Its Appendix Declaration

KELSEY MARTIN MOTT*

SUMMARY

A RESOLUTION ADOPTED LAST YEAR by the General Conference of UNESCO and to be discussed in December 1967 at Geneva, proposes to revise Article XVII of the Universal Copyright Convention and its Appendix Declaration so that a developing country could renounce the Berne Convention and still apply the U.C.C. in its relations with Berne members. This revision, if put into effect, would have a powerful impact not only upon the Berne Union and upon those countries that seek a solution of their copyright problems through a Convention with standards they are better able to meet, but also upon present members of the U.C.C., including the United States, who may well face future efforts to dilute its provisions.

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INTRODUCTION

ARTICLE XVII OF THE UNIVERSAL COPYRIGHT CONVENTION and its Appendix Declaration have assumed special importance because of recent proposals to revise it for the benefit of developing countries. The General Conference of UNESCO, (United Nations Educational, Scientific and Cultural Organization), at its fourteenth session held in Paris in October-November 1966, adopted a resolution, No. 5.122, aimed at allowing a developing country to renounce the Berne Convention and still apply the Universal Copyright Convention in its relations with Berne members. The purpose of the proposed amendment is to suspend, in the case of works which have as their country of origin a developing State, the sanctions provided in the Appendix Declaration of the Universal Copyright Convention for members that have withdrawn from the Berne Union.

When the Universal Copyright Convention (U.C.C.) was being planned and drafted, one of the conditions most emphasized by representatives of the States already members of the Berne Union was a safeguard to prevent countries from withdrawing from the Berne Union to join the U.C.C. The resulting provisions were those contained in Article XVII and the Appendix Declaration relating to it. These provisions have three objectives: (1) to emphasize that the U.C.C. does not affect the Berne Convention, (2) to establish sanctions against countries withdrawing from the Berne Union, and (3) to determine the extent of applicability of the U.C.C. by Berne Union member countries.¹

It has now been announced that the Intergovernmental Copyright Committee, which is the proper organ to prepare and convoke the conferences of the Convention for revision of the U.C.C., will meet jointly with the Permanent Committee of Berne on December 12-15, 1967 in Geneva.

The proposed revision has special significance in view of the results of the Intellectual Property Conference of Stockholm held there June 12-July 14, 1967, for purposes of revising the Brussels text of the Berne Convention. The most significant outcome of the revision at Stockholm was the "Protocol Regarding Developing Countries," which gives developing countries that are members of the Berne Union the right to make reservations with respect to the provisions of the Convention on certain points. The Protocol would in

¹ Bogsch, A., *The Law of Copyright Under the Universal Convention*, (1964), at 111.

effect allow developing countries, designated as such under the "established practice of the General Assembly of the United Nations," to depart from the minima otherwise prescribed for the duration of protection, and, under certain conditions, from the minima prescribed for the rights of translation, reproduction, and broadcasting. The Protocol would also allow them to restrict any kinds of rights otherwise guaranteed, if the use is for teaching, study and research in all fields of education.

The Protocol forms an integral part of the Stockholm Act for those countries that accede to or ratify Articles 1 through 21 of the Stockholm revision. A developed country that does not so ratify the Stockholm revision may voluntarily bind itself under the Protocol. If it neither ratifies Stockholm nor binds itself under the Protocol, it would not be obliged to allow the use of its works under the lower standard in any Union country.²

Of the 58 Berne countries, 51 were represented at Stockholm. Thirty-five of those represented signed the Stockholm revision and 16 did not. Among the 16 were the United Kingdom, Ireland, Canada and Australia.

The developing countries want to use English-language textbooks and other works under lower obligations than those imposed by the Brussels text of the Berne Convention, and some of them have indicated that they would consider renouncing Berne if they cannot do so. This is a situation that might well arise should developed countries, such as the United Kingdom, refuse to ratify the Stockholm Act or agree to be bound by the Protocol. This possibility in turn raises the question whether the developing countries that may choose to renounce Berne can turn to the Universal Copyright Convention, with its intermediate standard of copyright protection. The provisions of the U.C.C. and its Appendix Declaration constitute a stumbling block to such a move. Their suspension, as proposed by UNESCO's Resolution 5.122 would have a powerful impact, not only upon the Berne Union and upon those countries that are seeking a solution for their copyright problems through a Convention with standards they are better able to meet, but also upon present members of the Universal Copyright Convention who may well face future efforts to dilute its provisions.

It seems appropriate at this time to discuss in some detail Article XVII of the U.C.C. and the Appendix Declaration, as a basis for any

² Summary Report, *Intellectual Property Conference of Stockholm* (June 12-July 14, 1967) U.S. Dept. of State, (August 1967), at 2.

evaluation of the full significance of the proposed amendment in relation to the Berne Convention.

The actual text of the Article and Declaration as finally adopted at the Intergovernmental Copyright Conference held in Geneva in 1952 is as follows:

Article XVII

1. This Convention shall not in any way affect the provisions of the Berne Convention for the Protection of Literary and Artistic Works or membership in the Union created by that Convention.

2. In application of the foregoing paragraph, a Declaration has been annexed to the present article. This Declaration is an integral part of this Convention for the States bound by the Berne Convention on January 1, 1951, or which have or may become bound to it at a later date. The signature of this Convention by such States shall also constitute signature of the said Declaration, and ratification, acceptance or accession by such States shall include the Declaration as well as the Convention.

Appendix Declaration Relating to
Article XVII

The States which are members of the International Union for the Protection of Literary and Artistic Works, and which are signatories to the Universal Copyright Convention,

Desiring to reinforce their mutual relations on the basis of the said Union and to avoid any conflict which might result from the co-existence of the Convention of Berne and the Universal Convention,

Have, by common agreement, accepted the terms of the following declaration:

(a) Works which, according to the Berne Convention, have as their country of origin a country which has withdrawn from the International Union created by the said Convention, after January 1, 1951, shall not be protected by the Universal Copyright Convention in the countries of the Berne Union;

(b) The Universal Copyright Convention shall not be applicable to the relationships among countries of the Berne Union insofar as it relates to the protection of works having as their country of origin, within the meaning of the Berne Convention, a country of the International Union created by the said Convention.

In order to understand how these provisions of the U.C.C. evolved it is necessary to turn back several years to proposals that preceded the beginnings of the U.C.C.: indeed, as Dr. Bogsch puts it, to "the seed from which the Universal Copyright Convention ultimately grew."³ From that seed I will attempt to trace the developments that resulted in the provisions set forth above.

³ Kupferman and Foner, *Universal Copyright Convention Analyzed* (1955), at 143; Dr. Bogsch's chapter is entitled "Co-Existence of the Universal Copyright Convention with the Berne Conventions" and appears at pages 141 to 164.

EARLY HISTORY FROM ROME CONVENTION (1928) TO OUTBREAK OF WORLD WAR II

The seed from which the U.C.C. ultimately grew was a recommendation adopted by the Rome Revision Conference on June 1, 1928. This involved a two-part invitation: (1) an invitation to the American Republics that were signatories of a Convention to which non-American States could not adhere to accede to the Convention of Berne as revised in Rome; and (2) an invitation to all the interested governments to prepare a general agreement, based on the similar rules of the Rome and Havana Conventions, that had for its object the worldwide unification of the laws protecting the creations of the spirit.⁴

Dr. Bogsch, on whom I rely for this general early history, groups into two categories proposals that ultimately followed the Rome recommendation: (1) proposals for a new convention which, by revising the latest version of the Berne Convention, would replace that Convention; and (2) proposals for a new convention which would not replace the Berne Convention.⁵

In the first category was a proposal made in 1936 by Fritz Ostertag, Director of the Berne Bureau, to amend the Rome Convention to permit American countries to make a reservation to the "no formalities" provision of the Rome Convention and to require that works published in other countries of the Berne Union be entered in an international register to be kept by the Berne Bureau.⁶ In the same year, 1936, another such proposal was made for either international registration as suggested by Ostertag, or for the use of an international copyright notice. This latter proposal appeared in the Montevideo Draft Convention, Article 60.⁷

Also in the first category was the resolution adopted as late as 1949 at Neuchâtel, Switzerland, by the Permanent Committee of the Berne Union. This resolution not only recalled that the Berne

⁴ *Actes de la Conference Réunie à Rome*, published by the Berne Bureau, at 350. Dr. Bogsch reproduces an English translation of the text of the recommendation adopted at Rome, *Universal Copyright Convention Analyzed*, *supra* note 3, at 143.

⁵ *Universal Copyright Convention Analyzed*, *supra* note 3, at 144.

⁶ *Le Rapprochement des Conventions de Berne et de la Havane*, 49 *le Droit d'Auteur* 13 and 25 at 29 (1936).

⁷ Draft Convention on Copyright Protection: Approved at the Session Held on May 15, 1936, by the Committee Created in Accordance with the Resolution Adopted on December 16, 1933, by the Seventh International Conference of American States, published in the Montevideo Reports.

Convention is open to the accession of all countries but also took the view that the difficulties preventing new accessions could be overcome by suitable amendments in the Convention in accordance with the desires of new adherents and with the procedure for revision provided by the Convention itself.⁸ Dr. Bogisch points out that the next year (1950) this same Committee, meeting in Lisbon:

... did not again suggest the modification of the Brussels Convention, but made concrete proposals to safeguard the Berne Convention in the proposed universal convention.⁹

Proposals for a new convention that would not replace the Berne Conventions were also suggested in the 30's, and also apparently by Ostertag, who proposed a "bridge convention."¹⁰ This Convention would have existed side by side with the Rome and Havana Conventions. It would have been open only to countries members of the Berne group and the Pan American group, and would have provided that a country belonging to one group must extend national treatment to any work first published in a country belonging to the other group. The draft of the bridge convention would not have permitted the contracting States to require that foreign works fulfill formalities.¹¹

Since this draft made no concessions in regard to permitting the contracting States to require that foreign works fulfill formalities, there still remained one of the greatest obstacles to adherence to the Berne Convention by countries with a copyright system based on formalities.¹²

As Dr. Bogisch goes on to say, the failure of the "bridge convention" to gain supporters led to the idea of a "third" convention and the Paris Draft of a "Universal Convention" in 1936. This draft was prepared by a Committee of Experts appointed by the International Institute of Intellectual Cooperation and the International Institute for the Unification of Private Law.¹³

⁸ This resolution, adopted September 30, 1949 appears in English in 3 *UNESCO Copyright Bulletin* No. 3-4 (1950) at 203, n. 2.

⁹ *Universal Copyright Convention Analyzed*, *supra* note 3 at 147. The English text of the Lisbon resolution appears in 3 *UNESCO Copyright Bulletin* No. 3-4 (1950) at p. 204. The proposals are summarized *infra* note 34.

¹⁰ *Le Rapprochement des Conventions de Berne et de La Havane*, 48 *Le Droit d'Auteur* 100 and 109 (1935).

¹¹ *Id.* at 101-102, and see *supra* note 3, at 147-148.

¹² *Supra* note 3, at 148.

¹³ *Id.* at 149.

The English text of Article 19 of the Paris Draft and the official explanation is:¹⁴

Article 19. This Convention in no way affects the maintenance of the present Conventions existing between the contracting countries in so far as the said Conventions confer upon authors or their representatives broader rights than those granted by this Convention or in so far as they contain other stipulations which are not contrary to this said Convention.

(The same provision appeared in an additional article in the first text of the Berne Union Convention prepared in 1886 by the Third Diplomatic Conference of Berne. It is more especially intended to indicate that no objection is directed to the rules respectively laid down in the Berne Convention and the Pan American Convention.)

In winding up this historical account Dr. Bogsch remarks:

The second World War prevented the testing of the viability of the Paris Draft, but the new Convention, as adopted in Geneva in 1952, also follows the principle of a "third" convention and expressly states that it does not replace the Berne Convention and the Pan American Conventions.¹⁵

HISTORY FROM WORLD WAR II TO GENEVA CONFERENCE OF 1952

In 1946, at the First Session of its General Conference, UNESCO decided that the question of a universal convention for the protection of literary, artistic and scientific property should be considered. At its session in July 1947, the Executive Board resolved to implement that decision and to convene a Committee of Experts on copyright.¹⁶ This Committee of Experts, which met in Paris from September 15-20, 1947, included two members from the United States, Dr. Edith Ware and Mr. John Schulman. It was the recommendation of the Committee that UNESCO should undertake a project for a universal copyright system, first making studies and ultimately preparing a draft.¹⁷ In the opinion of the Experts, a final report leading directly to practical steps could be submitted to the Third Session of the General Conference in 1948, and the steps

¹⁴ *Id.* at 149, nn. 17-18.

¹⁵ *Id.* at 150.

¹⁶ *Introductory Report for the Provisional Committee of Experts on Copyright*, UNESCO House, Paris, Sept. 15-20, 1947, 1 *UNESCO Copyright Bulletin* No. 2, 70-71 (1948).

¹⁷ *Recommendations Made by the Committee of Experts*, *supra* note 16, 1 *UNESCO Copyright Bulletin* No. 2, 82 (1948).

leading to the adoption of a universal convention could in turn be taken in 1949.¹⁸

The work of the Paris Committee of Experts laid the foundation for the Resolutions adopted by the General Conference of UNESCO in Mexico City in November 1947.¹⁹ The Mexico City Resolutions implemented the preparatory work for the universal convention recommended by the Paris Committee of Experts.

In 1948, a Conference held in Brussels from June 6-26 revised the Berne Convention. Among the recommendations adopted by that Conference was the following:

II. Universal Copyright Protection. The Conference recommends that there be realized without delay an understanding between States toward the institution of universal copyright protection.²⁰

In December, 1948, the Resolutions taken at Beirut by UNESCO referred to preparations for a meeting of Experts in 1949 to consider certain documents in relation to the drafting of a Universal Convention on Copyright.²¹ Those Experts met in Paris from July 4-9, 1949. Dr. Luther Evans of the United States was the Rapporteur, and Mr. Arthur Fisher of the U.S. Copyright Office and Mr. John Schulman were among the Experts present.

At the meetings it was pointed out by some of those participating that any unification or bridge between the Berne and Washington Conventions was useless and that it was necessary "to build a new staircase."²² Mr. de Sanctis (Italy), although favoring the adherence to

¹⁸ Report by the Director General on Copyright to the General Conference of Mexico, Oct. 5, 1947, 1 *UNESCO Copyright Bulletin* No. 2, 86 (1948).

¹⁹ These Resolutions appear in 1 *UNESCO Copyright Bulletin* No. 1, 2 (1948).

²⁰ Resolution and Recommendations adopted 26 June 1948 by the Dipl. Conf. at Brussels, 1 *UNESCO Copyright Bulletin* No. 2, 136 (1948).

²¹ Resolutions Concerning the 1949 Programme of the Copyright Division Adopted by the Third Session of the General Conference of UNESCO, Beirut; December 1948, 2 *UNESCO Copyright Bulletin* No. 1, 54 (1949). See also Hepp, *Introduction to the Work of the Committee of Copyright Experts*, 2 *UNESCO Copyright Bulletin* No. 2-3, 4 (1949), in which he refers to the "three traditional means for taking a first step towards establishment of international rules" for protection of intellectual property: general adherence to an existing convention, the conclusion of bi-partite and multi-partite treaties, and a convention open to adherence by all. To take a position on these three possibilities was to be the task of the Experts in 1949.

²² Minutes of the Meetings of the Committee of Experts, Paris, July 4-9, 1949, 2 *UNESCO Copyright Bulletin* No. 2-3 (1949) at 180, 186 (Mendilaharzu, Argentina), 190 (Schulman, U.S.A.).

Berne of American countries even if reservations were required, felt it necessary to revert to the idea of a new convention which should avoid prejudicing existing conventions.²³ Mr. Crewe (U.K.) remarked that if the danger of denunciation of the Berne Convention (because the new convention set an inferior standard) were taken seriously, the Committee might as well disperse.²⁴

The Committee of Experts recommended that UNESCO proceed toward the adoption of a universal copyright convention based on certain general principles. The second principle was that the Convention should not abridge any legal right of protection derived from any existing multilateral or bilateral treaty, and should encourage continued adherence and further adhesions to such treaties.²⁵ The Report of the Rapporteur-General, Dr. Evans, stated:

Anxiety was expressed by some Experts that the existence of such a low standard Convention might induce adherents of the Berne Convention to withdraw from it and rely solely on the new Convention, thus resulting in what they regarded as a dangerous regression in Copyright relations. The majority of Experts, however, did not share this anxiety, in view of the principle which it adopted of safeguarding present Conventions. It was deemed desirable, of course, as stated in the resolution, that wider adhesion to all existing multilateral Copyright Conventions should be encouraged.²⁶

Again the General Conference of UNESCO, in October, 1949, adopted (at its Fourth Session) Programme Resolutions for the next year that included preparation for the drafting and adoption of a Universal Convention on Copyright.²⁷ It was planned that still another Committee of Experts would meet in the autumn of 1950 and it was recommended that further steps be taken on the basis of the various governments' replies to a request for views on a Universal Copyright Convention.²⁸

As pointed out in the Report of the Director General of UNESCO made at Florence in May, 1950, to the Fifth Session of the General Conference concerning the Programme of UNESCO in the Field of Copyright,²⁹ replies from eight governments had already reached the

²³ *Id.* at 184.

²⁴ *Id.* at 206.

²⁵ *Id.* at 248. The Recommendations as adopted are set forth at page 162 (2 *UNESCO Copyright Bulletin* No. 2-3, 1949) and are identical with respect to Principle 2.

²⁶ Report presented by Dr. Luther H. Evans, the Rapporteur-General of the Committee of Experts on Copyright, July 4-9, 1949, 2 *UNESCO Copyright Bulletin* No. 2-3, 154 (1949) at 156.

²⁷ *Id.* No. 4 at 14.

²⁸ *Id.* at 20. The request for views appears at p. 16.

²⁹ 3 *UNESCO Copyright Bulletin* No. 1, 114 (1950).

Secretariat by March of 1950, and with one exception were all in favor of the Convention.³⁰ A later report, made in October 1950, to the Committee of Experts after replies had been received from 26 more countries,³¹ indicated that 28 countries stated their willingness to participate in an intergovernmental conference to consider and, if appropriate, draft a Universal Copyright Convention. Fifteen countries, including the United States, agreed with the principle that the Convention should be construed to encourage continued adherence and further adhesions to existing multilateral or bilateral treaties.³² Italy suggested that States withdrawing from the Berne Union should not, in their relations with the States of that Union, be entitled to claim the benefits of the Universal Convention.³³

The groundwork was now laid for the meeting of the Third Committee of International Copyright Experts, to take place in Washington, D. C., from October 23 to November 4, 1950. When the meeting was convened, among the participants from the United States were Dr. Luther Evans, Mr. John Schulman, Mr. Arthur Fisher and Judge Charles Wyzanski.

At the 1950 meeting of Experts, Mr. de Sanctis (Italy) pointed out that the countries, according to their replies to the questionnaire, wanted clauses to be included in the Convention making it more difficult for member countries of Berne to leave the Union: that in fact clauses were demanded similar to those contained in the Lisbon Resolution of 1950.³⁴ A subcommittee was appointed to discuss and report upon the problems in connection with the relationship of the Berne Union to the proposed Universal Convention. The subcommittee, which consisted of Messrs. Bolla, Wyzanski, and Bodenhhausen, reported that it considered it necessary that certain clauses be inserted in the Universal Convention or in an Additional Protocol

³⁰ *Id.* at 117.

³¹ Report of UNESCO's Secretariat to the Committee of Experts at Washington (October 1950), 3 *UNESCO Copyright Bulletin* No. 2, 3 (1950).

³² *Id.* at 4, 5.

³³ *Id.* at 5.

³⁴ *Minutes of the Meetings of the Committee of Experts*, 3 *UNESCO Copyright Bulletin* No. 3-4, 36 (1950) at 46. The Lisbon Resolution called for inclusion in the U.C.C. of a clause whereby relations between States signatories of both the Berne and Universal Conventions would be governed exclusively by the Berne Convention, and Berne States withdrawing from the Berne Union could not invoke the benefits of the U.C.C. in their relation with the States of the Union; also a clause whereby a work published for the first time in a U.C.C. country not a Berne member, should also be simultaneously published within the union in order to be protected.

which would be signed by the signatories of the U.C.C. who belong to the Berne Union. Those clauses would provide that (1) in relations between countries that have adhered to the Berne Convention of 1886 or to any of the later revisions, the Convention and revisions alone would be applicable, except that works published simultaneously in a Berne country and in a Universal Convention country not party to Berne would be accorded any additional protection afforded by the U.C.C., and (2) countries that withdrew from the Berne Union, or that after January 1, 1950, had withdrawn, could invoke the benefits of the Universal Convention only in their relations with countries that are not parties to Berne.³⁵

Mr. Boutet (France) said he agreed with Mr. de Sanctis that the clause was indispensable "to lift the mortgage of fear from the minds of the countries belonging to the Berne Union."³⁶ On the other hand, Mr. Sen-Gupta (India) thought it would be an extremely bad start towards a Universal Convention to ostracize from the latter nations that had withdrawn from the Berne Union.³⁷

There was discussion by the subcommittee of the form the recommended provision concerning the countries adhering to the Berne Union ought to take. The question was whether it should be included as an integral part of the proposed convention or, alternatively, whether it should take the form of a protocol open to signature by the Berne countries, it being understood that only those Berne countries that had adopted the additional protocol should be eligible to sign the new Convention.³⁸ It was concluded by the subcommittee that the scope and function of this meeting of experts were merely to point out the two methods available, leaving the final decision as to the form the text should take to the Drafting Committee.

The Third Committee of Experts adopted the suggestions of the subcommittee with respect to inserting safeguarding clauses either in the Universal Convention or in an Additional Protocol. The wording of the clauses as set forth in the recommendations of the Third Committee varied scarcely at all from that proposed by the subcommittee.³⁹ The work of UNESCO's Third Committee of Experts was

³⁵ *Id.* at 52.

³⁶ *Id.* at 54

³⁷ *Id.* at 70

³⁸ Report presented by W. P. J. O'Meara, Rapporteur, 3 *UNESCO Copyright Bulletin* No. 3-4, 15 (1950) at 18. See also Minutes, *supra* note 34 at 52.

³⁹ Recommendations of the Committee of Experts, 3 *UNESCO Copyright Bulletin* No. 3-4, 9-10 (1950).

approved by the subcommittee of the Permanent Committee of the Berne Union, which met in March 1951.⁴⁰

UNESCO convened a Committee of Copyright Specialists to be appointed by their governments and to meet in Paris from June 18-23, 1951. This Committee was to act as an official subcommittee of the Sixth Session of UNESCO's General Conference, to prepare the first draft of the Universal Copyright Convention. In the meantime there was a supplementary request for views based on principles recommended by the Copyright Experts who had met in Washington.⁴¹ The replies served as the basis of the work of UNESCO's Fourth Committee of Copyright Experts which met in Paris.⁴²

At the Paris meeting in June 1951, the Experts present from the United States were Dr. Luther Evans, Mr. Abraham L. Kaminstein and Mr. John Schulman. Mr. G. H. C. Bodenhausen of the Netherlands was the Rapporteur-General. At this meeting an actual draft of the Universal Copyright Convention was formulated.⁴³ It contained 16 articles, of which Article XV related to safeguards for the Berne Convention, and it also included a Protocol relating to Article XV.

Article XV provided:

Article XV

- (1) This Convention shall not in any way affect the provisions of the Berne Convention for the Protection of Literary and Artistic Works or membership in the Union created by that Convention.
- (2) In application of the foregoing paragraph, a protocol is signed as of today's date by the States signatories of the present Convention which are also bound by the Berne Convention. The said Protocol constitutes an integral part of this Convention for the States bound by the Berne Convention or which will, in the future, enter into the Union created by the Berne Convention.

The Protocol provided:

- (1) The States which are members of the Berne Union for the Protection of Literary and Artistic Works, which are signatories of the Universal Copyright Convention, desiring to reinforce their mutual relations on the basis of the said Berne Union

⁴⁰ 4 *UNESCO Copyright Bulletin* No. 1, 3 (1951).

⁴¹ *Id.* at 4.

⁴² *Id.* No. 3 at 3. See also the breakdown on these replies with respect to safeguards for the Berne Convention in a "Condensed Analytical Report on Governmental Replies to the Supplementary Request for Views," 4 *UNESCO Copyright Bulletin* No. 4, 96 (July 1951).

⁴³ *Id.* No. 3 at 7-12.

and, on the other hand, to avoid any conflict which might result from the co-existence of the two Conventions,

Have, by common accord, established the following Protocol:

- (a) Works having as their country of origin, within the meaning of the Berne Convention, a country which withdraws or has withdrawn from the said Union after 1 January 1951, shall not be protected by the Universal Copyright Convention in the countries members of the Berne Union.
 - (b) The Universal Copyright Convention shall not be applicable to the relationships among countries of the Berne Union in so far as concerns the protection of works having as their country of origin, within the meaning of the Berne Convention, a country of the said Berne Union.
 - (c) The provisions of sub-paragraph (b) above shall not prevent the author or other copyright proprietor from relying on the application of the terms of the Universal Copyright Convention which confer rights greater than those conferred by the Berne Convention so far as concerns the protection of works published simultaneously in a country of the Berne Union and in a State party to the Universal Copyright Convention not belonging to the Berne Union.
- (2) This Protocol in accordance with Article XV of the Universal Copyright Convention constitutes an integral part of that Convention, the ratification of or adherence to which by a country which belongs or shall belong to the Union of Berne, shall constitute ratification of or adherence to this Protocol.

As pointed out in Mr. Bodenhausen's Report, it was decided that the Protocol would be considered as an integral part of the U.C.C. At the same time, one of the recommendations made by the Experts at Washington, which called for the assurance that additional protection would be provided by the U.C.C. to certain relations governed by the Berne Convention, was put aside.⁴⁴ This was done in order to take into account the view that the Berne Convention would not apply in a case where first publication took place outside the countries belonging to the Berne Convention.⁴⁵ On the intervention of the Italian delegate, who believed that clause (c) of the Additional Protocol warranted more careful study, it was decided that this clause would be adopted only provisionally and that the text would also be referred to the Permanent Committee of the Berne Union for examination.⁴⁶

The preliminary draft was communicated to the governments of all States for comment. Japan replied that the first paragraph (a) of

⁴⁴ Report by G. H. C. Bodenhausen, Rapporteur, 4 *UNESCO Copyright Bulletin* No. 3, 17 (1950) at 20.

⁴⁵ *Id.*

⁴⁶ *Id.*

the Protocol to Article XV would make it impossible for the countries which may have withdrawn from the Berne Union to invoke even the benefits of the U.C.C. in their relations with countries parties to the Berne Union. The Japanese government did not agree to such a provision since it considered it unreasonable in a convention which must be universal. Japan agreed to paragraph (b), and had no objection to paragraph (c) provided that its desire in relation to the right of translation be satisfied. It was the wish of Japan to keep the status quo in regard to translations as regulated by the Japanese law and the Berne Convention; Japan was bound by the 1896 text of Berne as far as the right of translation into Japanese is concerned, since it made a reservation in that respect.⁴⁷

The Philippines felt there was no need to sign the Protocol and make it an integral part of the U.C.C., so proposed that paragraph 2 of Article XV be eliminated.⁴⁸ Canada stated that it did not like the idea of a dual union system such as would be entailed by Article XV and its Protocol, as setting one Convention against the other and discriminating against members of Berne withdrawing after a certain date. Canada's conclusion was that members of Berne should adhere to the U.C.C. "establishing the national treatment reciprocity" and remain members of Berne, which aims at uniformity of legislation.⁴⁹

Mexico would have omitted paragraph (a) of the Protocol⁵⁰ and Monaco objected that no definition of "simultaneous publication" was given in clause (c) of the Protocol.⁵¹ No objections to Article XV and the Protocol were made by the United States.⁵²

Now that the Preliminary Draft was completed, the scene was at last set for the convocation of the Intergovernmental Conference for the adoption of the Universal Copyright Convention. UNESCO's General Conference at its Sixth Session authorized the Director General to invite the governments of all States, whether members of UNESCO or not, to a Conference for the purpose of preparing the Convention. The Swiss government had invited the Conference to meet in Geneva from August 18 to September 6, 1952.

This brings us to the threshold of the recent history of Article XVII of the U.C.C. and its Appendix Declaration.

⁴⁷ Observations, 5 *UNESCO Copyright Bulletin* No. 1, 20 (1952).

⁴⁸ *Id.* at 29.

⁴⁹ Observations, 5 *UNESCO Copyright Bulletin* No. 2, 10 (1952).

⁵⁰ *Id.* at 23.

⁵¹ *Id.* at 25.

⁵² *Id.* at 103.

RECENT HISTORY—THE GENEVA CONFERENCE OF 1952

The Geneva meeting took place August 18 to September 6, 1952. Dr. Luther Evans was Head of the United States Delegation. Mr. Arthur Fisher, then Register of Copyrights, was an Adviser. Mr. Plinio Bola of Switzerland was President of the Conference and Sir John Blake of the United Kingdom was Rapporteur. Dr. Arpad Bogsch was present as Secretary.

The Draft Universal Copyright Convention, Working Document No. DA/2, was presented to the Conference in Plenary Session, August 19, 1952.⁵³ It will be recalled that the present Article XVII of the U.C.C. and its Appendix Declaration were Article XV of the Preliminary Draft, with a Protocol.⁵⁴

Mr. Thomas of the UNESCO Secretariat, who presented the Preliminary Draft, DA/2, remarked briefly with respect to Article XV and the Protocol that:

... [it] settles the relations between the Universal Convention and the Berne Convention. In its present form, as drafted by the Committee of Government Experts of 1951, it is in line with the wishes expressed in past years by the Permanent Committee of the Berne Union itself.⁵⁵

When the general discussion opened, Mr. Pennetta (Italy) said that the Italian government was very glad to see Article XV in the draft Convention, safeguarding the Berne Union, adding:

I could not, on behalf of the Italian Government, accept anything prejudicial to the Berne Union or even anything likely to become so. ... The Berne Union stands firm; the Berne Union is alive. Accordingly, on behalf of the Italian Government, the Italian delegation declares that it attaches importance to the retention of this provision in the Convention that we hope to sign. We hope ... that with this aim before us we shall bring our ship safe to shore.⁵⁶

Dr. Evans (U.S.) said that "the safeguards which Berne has put in the draft Convention are adequate."⁵⁷

The Main Commission of the Conference was established to include all the members of the Conference, its purpose to consider

⁵³ Minutes, Conference in Plenary Session, Aug. 19, 1952, *Records of the Intergovernmental Copyright Conference*, Geneva, 18 Aug.-6 Sept. 1952, 101, 117.

⁵⁴ For the provisions of Article XV of the Draft Convention and of the Protocol see *supra* p. 18.

⁵⁵ Minutes, *supra* note 53, at 118.

⁵⁶ *Id.* at 119.

⁵⁷ *Id.* at 125.

the separate articles of the Draft.⁵⁸ The Main Commission then held meetings from August 19 through September 4, 1952.

When the Main Commission reached the discussion of Draft Article XV and the Protocol (DA/2), there were several proposals to be considered. Portugal proposed (DA/117) that paragraph 2 of Article XV be replaced by subparagraphs (a) (b) and (c) of the Protocol, omitting the Protocol.⁵⁹ Switzerland (DA/129) would have changed the language of the first sentence of paragraph 2 of Article XV to say that the "Protocol is joined to the present Convention" and to omit reference to its being "signed as of today's date by the States signatories of the present Convention which are also bound by the Berne Convention." In the second sentence, Switzerland would have inserted "as of 1 January 1951 or who may adhere thereto in the future" after the reference to the "States bound by the Berne Convention."⁶⁰

Cuba (DA/131) would have omitted Article XV and its Protocol.⁶¹ Japan (DA/132) would have omitted paragraph (a) of the Protocol, or (DA/132) would have replaced it as follows:

The countries signatories of the Universal Copyright Convention, shall have the faculty, within their respective territories, of not applying all or part of the protection provided for by the above mentioned Convention, to those works, which in the terms of the Berne Convention, have as their country of origin a country which may have withdrawn, or shall have withdrawn from the said Union as of 6 September 1952.⁶²

Japan added the comment: "This proposal is motivated by scruples of a purely juridical nature. The Member States of the Berne Union who sign and ratify the Universal Convention cannot obligate those States who do not sign it."⁶³

In the opinion of the Canadian delegate, paragraph (a) of the Protocol was contrary to the spirit of the Universal Convention and should be deleted.⁶⁴

The Cuban proposal (DA/131) was rejected by a vote, and the Chairman of the Main Commission (Mr. Bolla) proposed that the

⁵⁸ *Id.* at 129.

⁵⁹ *Working Documents, Records of the Intergovernmental Copyright Conference*, Geneva, 18 Aug.-6 Sept., 1952, 367.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Working Documents*, *supra* note 59, at 367.

⁶³ *Id.*

⁶⁴ Minutes: Main Commission Sessions, Aug. 28, 1952, *Records of the Intergovernmental Copyright Conference*, Geneva, 18 Aug.-6 Sept. 1952, 180.

relationship between Article XV of the Draft and the Protocol be referred to a working group.⁶⁵ The working group, under the chairmanship of Professor Bodenhausen of the Netherlands, examined the proposals contained in DA/117 of Portugal, DA/129 of Switzerland and DA/132 of Japan and made a Report,⁶⁶ of which the following is a summary:

(1) After Portugal had withdrawn its proposal (DA/117) to delete the Protocol and make it part of Article XV, the next question was whether the Protocol should be signed separately from the Convention. The working group decided in favor of a single signature valid for both the Convention and the Protocol, but gave it another name, "Appendix Declaration."

(2) The Canadian delegation did not insist upon its point of view that the Berne Convention could defend itself without having recourse to paragraph (a) of the Appendix Declaration.

(3) The Swiss proposal (DA/129) was unanimously accepted since it strengthened the safeguarding system.

(4) The Japanese proposal (DA/132) was abandoned when the Chairman suggested that the words "members of the Universal Convention" be added to paragraph (a) of the Appendix Declaration.

(5) There was thus some modifications, and on one point the working group was not able to make a decision. This was paragraph (c) of the Appendix Declaration, with respect to which the working group said:

At present it is not possible to determine whether the Universal Convention will contain provisions more favorable to authors than the corresponding provisions of the Berne Convention. This contingency might arise in the right of translation in the case of "reservation" countries of the Berne Union (Ireland, Japan, Turkey, Yugoslavia, etc.) . . . paragraph (c) . . . will have to be examined anew.⁶⁷

The Drafting Committee changed Article XV to Article XVII with the Appendix Declaration recommended. The modified Draft of the Appendix Declaration contained paragraph (c), but this was omitted in the final text.⁶⁸

In connection with subparagraph (3), it might be added that the subparagraph, if retained, would have been one obstacle to Japan's signature of the U.C.C. For example, during the discussions of Articles V (translations), XX (reservations) and the Appendix Declara-

⁶⁵ *Id.*

⁶⁶ Working Documents, *supra* note 59, 367-68.

⁶⁷ *Id.* at 368.

⁶⁸ *Id.* at 369.

tion relating to Article XVII, a document submitted by Greece, Japan and Turkey was voted down (DA/182)⁶⁹ much to the disappointment of Japan. The document provided that, notwithstanding the restrictions in paragraph 2 of Article V (translations), any Contracting State might maintain its national legislation as regards translation into its national language or languages if such legislation had been adopted before September 6, 1952 in conformity with one of the multilateral conventions existing prior to the present Convention, and if it protects the author's translation rights for at least ten years. When the adverse vote was announced the delegate from Japan deplored the results and, as reported in the minutes:

He greatly feared that the Universal Copyright Convention could not be signed by Japan. However, he would like some explanations about the meaning of Article V, so as to ascertain what obligations it would impose . . . on Japan. The speaker wondered whether his country could adopt two different systems with regard to translation rights, one in relation to the Berne Union States (exclusive right during 10 years) and the other in relation to the States belonging only to the Universal Copyright Convention (exclusive right during seven years, then a legal license); or whether this dualism might not violate Article II of the Universal Copyright Convention, which laid down the principle of national treatment. *Also, he did not see how a double system in connection with translation rights could be reconciled with paragraph (c) of the Declaration relating to the Article about the Berne Convention.* [Emphasis supplied]⁷⁰

The Chairman, Mr. Bolla, remarked that it would be for the courts to decide whether, in regard to translations, the U.C.C. system was more favorable than the reservation system of Berne.⁷¹

However, the Chairman of the working group, Mr. Bodenhause, later asked that subparagraph (c) be deleted. One reason he gave to the Conference in Plenary Session was that the provision made no allowance for the special position of the "reservatory" countries of the Berne Union.⁷² Mr. Bodenhause explained:

The author of a work published simultaneously in the territory of the States such as those already mentioned could invoke the Universal Convention to prevent application of the reservations under which one of those countries had acceded to the Berne Convention.⁷³

The speaker emphasized that the deletion of the provision in question would make it easier for the "reservatory" Berne countries

⁶⁹ Minutes: Main Commission Sessions, *supra* note 64, 235-36. DA/182 is set forth in Working Documents, *supra* note 59, at 348.

⁷⁰ Minutes, *supra* note 69, at 236.

⁷¹ *Id.* at 237.

⁷² Minutes, Plenary Sessions, *supra* note 53, at 255.

⁷³ *Id.*

to accede to the U.C.C.⁷⁴ It was then voted to delete paragraph (c). The Japanese delegate stated that the deletion "had gone some way towards satisfying his delegation."⁷⁵

Sir John Blake, the Rapporteur of the 1952 Geneva Conference, summarized the evolution of Article XVII and the related Declaration in his Report.⁷⁶ Not referred to in his Report, however, is one more aspect of the evolution of the Article and the Declaration that should be mentioned more fully here, before this "history" can be said to be complete.

An article by Valerio de Sanctis (Italy), entitled "The Clauses Providing 'Safeguards for the Berne Convention',"⁷⁷ points out that, if the wording of Article XVII is compared with that of Article XV of the Preliminary Draft, Article XVII has imposed a firmer obligation to safeguard the international union: first, because the reference to the Protocol is replaced by one to an "Appendix Declaration," and, second, because it is stated that the Appendix Declaration is an integral part of the Convention for States bound by Berne on January 1, 1951 or which have or may become bound to it at a later date.

This, says de Sanctis, ruled out certain aspects that might have weakened Berne. Monaco, for example, had pointed out in connection with the Protocol and Article XV, paragraph 2, that the rule laid down in Article XV as then worded might be of no effect as regards countries which had denounced Berne before acceding to the U.C.C.

The paragraph in question provided that the Protocol should be an integral part of the Convention for States bound by the Berne Convention or which in future entered into the Union created by the Berne Convention. A country belonging to the Berne Union might therefore have denounced that Convention, waited for the 12 months specified in Article 29, and thereafter have acceded to the Universal Convention. In such a case, the provisions of Article XV and the Protocol could not have been invoked against the country. The final wording of paragraph 2 of Article XVII removed this disadvantage by giving legal effect to the mere fact of having belonged to the Berne Union at the date specified.⁷⁸

⁷⁴ *Id.*

⁷⁵ *Id.* at 256.

⁷⁶ *Report of the Rapporteur-General, Records of the Intergovernmental Copyright Conference*, Geneva, 18 Aug.-6 Sept. 1952, 90.

⁷⁷ 8 *UNESCO Copyright Bulletin* No. 1, 50 (1955), at 51.

⁷⁸ *Id.*

This substantially completes the history and background of Article XVII and the Appendix Declaration of the U.C.C. As de Sanctis says:

There can be no doubt . . . that the provisions of Article XVII and the Appendix Declaration constitute obligations deriving from a collective instrument adopted by the countries of the Berne Union which are also parties to the Universal Convention, acting together to discourage States belonging to the Berne Union from withdrawing from it and contenting themselves with the system of the Universal Convention alone.⁷⁹

RECENT MOVES TO CHANGE ARTICLE XVII AND THE APPENDIX DECLARATION

At its Seventh Session, held in New Delhi in December 1963, the Intergovernmental Committee of UNESCO asked the Secretariat to study the question of the need for revision of the U.C.C., taking into consideration the problems of the newly independent and developing States, and to report thereon at the next session; hence at the Eighth Session, which met in Paris in November 1965, in conjunction with the Twelfth Session of the Permanent Committee of the Berne Union, one of the items on the Intergovernmental Committee Provisional Agenda was the revision of the U.C.C. "with due regard to the problems of the newly independent and the developing countries."⁸⁰

The Secretariat had already consulted each of the States parties to the U.C.C. on the matter in a letter dated August 26, 1964, and it had emerged that the States felt that not enough time had elapsed since the entry into force of the Convention to permit the formulation, without a wider experience of its application, of principles which might justify its revision.⁸¹

Mr. Lokur (India) suggested at the November 1965 session that a Diplomatic Conference be convened to revise the U.C.C. "simultaneously with the Diplomatic Conference for revision of the Berne Convention." Mr. Lokur remarked further that "should the new Article 25bis be adopted in the text of the Berne Convention as

⁷⁹ *Id.* at 54. Interpretations of the effect and application of Article XVII and the Appendix Declaration as finally conceived are set forth by Bogisch in his chapter in Kupferman and Foner, *Universal Copyright Convention Analyzed* (1955) at 150-64, and in his book *The Law of Copyright Under the Universal Convention* (1964) at 111-123.

⁸⁰ *Intergovernmental Copyright Committee*, Eighth Session, Paris, Nov. 1965, Docs. IGC/VIII/4 at 1 and *Id.* 12 at 4.

⁸¹ *Id.* 12 at 4.

revised in Stockholm (1967) it would be necessary to amend Article V of the Universal Convention concerning the right to translation.”⁸²

The November 1965, Intergovernmental Committee decided by 9 votes to 1 to defer the question of the revision of the U.C.C.⁸³

Mr. Kaminstein (U.S.) observed that:

While it was difficult to envisage a conference for the revision of the Universal Convention meeting concurrently with the Diplomatic Conference for revision of the Berne Convention, the necessity was becoming apparent for an immediate study in the light of the anticipated results of the Stockholm Conference, of the amendments to be made to the Universal Convention.⁸⁴

The Intergovernmental Committee adopted Resolution No. 53 (VIII), deciding to defer consideration of the question of revision of the U.C.C. until the next session of the Committee.⁸⁵

Thus, only generalizations had been expressed at the joint 1965 meeting with respect to revision of the U.C.C. and a postponement had been agreed upon. However, at the Fourteenth Session of the General Conference of UNESCO, which was held in Paris in October-November 1966, the matter of revision of the U.C.C. was reopened with a specific thrust towards Article XVII and the Appendix Declaration. A resolution was adopted, No. 5.122,⁸⁶ expressing the opinion that Article XVII of the Universal Convention and the Appendix Declaration have consequences that are prejudicial to the interests of the States acceding to that Convention, “since it is stipulated therein that works which, according to the Berne Convention, have as their country of origin a country which has withdrawn from the International Union created by the said Convention, after January 1, 1951, shall not be protected by the Universal Copyright Convention in countries of the Berne Union.”⁸⁷

The preliminary paragraphs of this resolution, which may be regarded as indicating the factors leading up to the expression of opinion mentioned above, referred specifically to:

. . . the recommendation, adopted by the African Study Meeting on Copyright held at Brazzaville (5-10 August 1963) under the joint

⁸² *Id.*

⁸³ *Id.* at 5.

⁸⁴ *Id.* See also in relation to footnotes 80-84 the *Report of the Twelfth Session of the Permanent Committee* (Berne) and of the *Eighth Session of the Intergovernmental Committee* (UNESCO), Paris, Nov. 15-18, 1966 at 32.

⁸⁵ Report *supra* note 84 at 35.

⁸⁶ Intergovernmental Copyright Committee, Fourteenth session, Paris, Nov. 1966, Doc. DG/126/397 Annex.

⁸⁷ *Id.* at 2.

auspices of UNESCO and BIRPI, "to the effect that the utilization of the works of the mind is an essential factor in the human fulfillment of the peoples of the developing countries;"

Article 27 of the Universal Declaration of Human Rights;

the fact that the conventions at present governing international relations in the matter of copyright "should be partially revised to take account of the economic, social and cultural conditions obtaining in the developing countries, which are essentially importers of works of the mind, while ensuring that authors enjoy a legitimate minimum degree of protection";

the necessity that Africa benefit from existing conventions by calling for their revision;

the recommendation of the African Experts on the study of a Draft Model Copyright Law (Geneva, 30 November—4 December 1964) addressed to the African States (members of U.C.C.) to the effect that they should request modification of Article XI and the relevant resolution so as to enable Africans to become members of the Intergovernmental Copyright Committee; and

the need for UNESCO to "facilitate the accession of these States to the Universal Copyright Convention so as to guarantee a minimum degree of protection to authors while allowing a broad dissemination of culture."⁸⁸

The UNESCO Resolution 5.122 invited the Director-General to submit the matter (of revision of Article XVII and the Appendix Declaration) to the competent bodies as soon as possible.⁸⁹ In pursuance of this, the Acting Director-General, Mahdi Elmandjra, circulated a letter on December 30, 1966, a copy of which was received by the U.S. State Department. The letter gave some further explanation of Resolution 5.122:

The purpose of this resolution is to suspend, in the case of works which have as their country of origin a developing State, the sanctions provided for in subparagraph (a) of the Appendix Declaration relating to Article XVII of the said Convention in the event of the accession thereto by a State that has withdrawn from the Berne Union. The proposed change is intended to enable developing countries to enjoy unrestrictedly the protection guaranteed by the Universal Convention which ensures minimum rights for authors, while permitting a wide dissemination of culture.⁹⁰

In the reply of the U.S. State Department (Mr. McKiernan) to the letter, it was said that "we believe that it would be advisable to wait

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Letter, Dec. 30, 1966 from UNESCO, Paris, Ref. D.G./6/126/397 answered April 19, 1967 by Thomas D. McKiernan, Dep. Dir., Office of Multilateral Policy and Programs, Bureau of Educational and Cultural Affairs, U.S. State Dept. (Copy in Office of Register of Copyrights).

until after the Intellectual Property Conference of Stockholm and then review the matter."⁹¹

Not long after the UNESCO letter of December 30, 1966, was circulated (with Resolution 5.122 enclosed, of course) an *Extraordinary Session* of the Permanent Committee of the Berne Union met in Geneva (March 14-16, 1967), "motivated by the urgent necessity for the Director of BIRPI to have the advice of the Committee on the attitude to be adopted towards the problems posed by the possibility of a revision of the Universal Copyright Convention, which would affect in particular the conditions governing the application of Article XVII of that Convention and of the Appendix Declaration relating thereto (the so-called Berne Union safeguard clause), as envisaged in Resolution No. 5.122."⁹²

The Committee first examined the Report presented by the Director of BIRPI and then proceeded to a discussion which brought forth various points of view. The Director's Report (DA/25/2) to the Permanent Committee explained that the reason for convening the extraordinary session was to examine the significance of the resolution of UNESCO for the development and functioning of the Berne Union.⁹³ In discussing this question of significance, the Report pointed out that although both the Berne and U.C.C. Conventions contain minimal requirements of protection ("minima") these requirements, as written into the two Conventions, are very different. In the U.C.C. the minima are few—relating to duration, formalities, and translation—whereas those in the Berne Convention have grown in number and scope until Brussels in 1948, when more flexibility was provided for national laws (e.g., the new provision on ephemeral recordings).

The Report said that the proposals of the government of Sweden for discussion at Stockholm in 1967 continued the trend of allowing exceptions from existing minima. For example, the Protocol regarding developing countries would, in effect, allow such countries to depart, to the extent defined in the Protocol, from the minima otherwise prescribed for the duration of protection and for the rights of reproduction, translation and broadcasting, and would also allow developing countries to restrict any kinds of rights otherwise

⁹¹ McKiernan letter *supra*, note 90.

⁹² Extraordinary Session of the Permanent Committee of the International Union for the Protection of Literary and Artistic Works (Berne Union), Geneva, Mar. 14-16, 1967, reported in *Copyright*, Monthly Review of BIRPI, Apr. 1967 at p. 66

⁹³ *Copyright*, *supra* note 92, at 70.

guaranteed, if the use is for exclusively educational, scientific, or scholastic purposes. The Report went on to say:

Notwithstanding these proposed exceptions devised for the benefit of African and any other developing countries, the Berne Convention continues to differ from the Universal Convention in that it (the Berne Convention) specifically requires the protection of the usual types of works and the usual types of rights—and not only the right of translation—as minimum. Thereby, . . . Berne . . . fulfills its historic role of fostering a significant degree of *similarity* among national legislations so that each country acceding to it be assured, in exchange for giving protection to foreign works, it will receive a comparable, meaningful protection in the other countries for the works of its own nationals.

The reason underlying these provisions [Art. XVII and Appendix Declaration] was a strong belief that [Berne] countries, which . . . were the architects and guardians of a certain level of meaningful international protection should continue, together, the task of evolving such protection. . . . Members of . . . Berne . . . are not unmindful of the changing needs . . . and [it] is flexible and thus continued adherence puts no unreasonable burden on the countries parties to it.⁹⁴

In the discussion that ensued after the presentation of the Director's Report (DA/25/2) the various points of view of the member States of the Committee and of the observers were expressed. It was clear that it was the unanimous desire to give consideration to the special position of the developing countries and to assist them to solve their difficulties of a legal, economic and practical nature in the field of copyright.⁹⁵ The Observer of UNESCO declared that the outcome and conclusions of the Stockholm Conference could be a determining factor for U.C.C. States, in the substantive decision to be taken concerning revision of the U.C.C.

The Delegation of Germany (Federal Republic) pointed out that the proposed revision (of Art. XVII and the Appendix Declaration) was not intended to facilitate accession to the U.C.C. but to make it easy for developing countries to denounce the Berne Convention, since the Article and Declaration apply only in cases of countries leaving the Berne Union.⁹⁶ The German delegation indicated that there were two possible ways of satisfying the requirements of developing countries: one through the Protocol Regarding Developing Countries, the other through the revision of the U.C.C., along the lines envisaged. However, the delegation expressed the opinion that it would be advisable to allow these countries to remain

⁹⁴ *Id.* at 72.

⁹⁵ *Id.* at 66.

⁹⁶ *Id.* at 66-67.

members of the Berne Union by facilitating, in certain respects, the exercise of the rights recognized by the Berne Convention.

The French Delegation agreed that the settlement of the problem should be worked out within the Berne Union itself. It reminded the meeting that France had participated in the drafting of UNESCO Resolution 5.122, but that it had always considered that the problem should first be discussed within the framework of Berne and that the outcome of Stockholm would make it possible to estimate the attitude to be adopted towards the Resolution.⁹⁷

The Delegation of Italy, which had also been associated with the Resolution, stressed the need to avoid any conflict between the two international organizations. The Delegation of the United Kingdom said it would be necessary to await the outcome of Stockholm, and the Indian Delegation hoped UNESCO would extend the time limit (May 1, 1967) for the expression of views. The latter delegation also declared that India had no desire to leave the Berne Union, and hoped the two conventions could "develop and strive together."⁹⁸

The UNESCO Observer said May 1, 1967, was not intended to be a deadline, and the question of revision of the U.C.C. would not be presented to the Intergovernmental Committee before autumn (1967).

The Delegation of Germany observed that from the aspect of procedure, it seemed preferable that governments express their opinions *after* the meeting of the Intergovernmental Committee and hoped that as the matter concerned both conventions, the two Committees (Intergovernmental and Permanent) would discuss the problem at joint sessions. The Observers of Czechoslovakia and Japan agreed with this point of view as did the Delegation of Belgium.⁹⁹

The Committee then adopted a resolution that was confined to questions of procedure, without entering into the details of the problems raised. The resolution, after reciting the bare facts pertinent to the situation, expressed the opinion that it would be premature to take a final position by May 1, 1967, on the question of the possible revision of the provision of the U.C.C. dealing with the Berne Convention, and decided to re-examine the question after the Stockholm Conference at its next Extraordinary Session, scheduled for December 12-15, 1967.¹⁰⁰

The Intellectual Property Conference of Stockholm was held June 12-July 14, 1967, for the purpose of revising the provisions of the text

⁹⁷ *Id.* at 67.

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 68.

of the Brussels Convention 1948. As stated in the Summary Report of the Department of State on the subject of the Intellectual Property Conference of Stockholm, the Protocol Regarding Developing Countries turned out to be the most significant change in the Berne Convention made at Stockholm.¹⁰¹

But without summarizing the provisions of the Protocol as it finally emerged at Stockholm, let us adhere to the requirements of chronological sequence and refer to the remarks made at Stockholm about the revision of Article XVII and the Appendix Declaration of the U.C.C. At the First Session (June 21, 1967) of Main Committee II, the Committee concerned with the Protocol, Mr. Saba, the UNESCO Observer, explained:

The Director-General of UNESCO felt it necessary to give to Committee II the reasons for the adoption of Resolution 5.122. The U.C.C., taking into account the economic, social and cultural conditions in the different parts of the world, fixes minimal norms of protection that will guarantee general respect for authors' rights. In fact it was the intentions of those who adopted that instrument to associate in a general system of protection the countries who are not in a position to assume all the obligations imposed by the other convention systems—principally Berne—and to rally, apart from the Spanish-American countries, the Arab countries, that is, the countries in process of development, as well as the African and Asian countries. It is then a question of importance whether it is actually necessary to ratify a special Berne Protocol which recaptures the minimum standards of the U.C.C. The developing States can adhere to the U.C.C. while they wait out the period during which they cannot fulfill Berne obligations.¹⁰²

Mr. Saba then recalled that several newly independent States found themselves bound by Berne, which was applied to them by the powers who assured their international relationships, without being able to meet the obligations imposed by the Berne text involved. Moreover, these same States found themselves in the position of being unable to abandon Berne and adhere to the U.C.C. because of the sanctions of paragraph (a) of the Appendix Declaration annexed to Article XVII of the U.C.C. It was to remedy this situation that Resolution 5.122 was adopted.¹⁰³

Mr. Saba said there were two reasons for the adoption of Resolution 5.122: the wish to continue to assist these African States

¹⁰¹ *Summary Report-Intellectual Property Conference of Stockholm* (June 12-July 14, 1967) U. S. Dept. of State, Aug. 1967, at 2.

¹⁰² Minutes, Main Committee II, June 21, 1967, Intellectual Property Conference of Stockholm, at 16-17.

¹⁰³ *Id.* at 17.

(members of Berne in the way mentioned above) by facilitating their adhesion to the U.C.C.; the opinion that Article XVII and the Declaration were too burdensome, since if these countries withdrew from Berne they would not be protected by the U.C.C. in the Berne countries. The proposals submitted to the UNESCO General Conference were to add to the actual text of the Appendix Declaration annexed to Article XVII the following paragraph:

However, the application of this provision will be suspended with respect to works which have as their origin a country in process of development as defined by the economic and social Council (Resolution 2029 [XX] of the General Assembly of the United Nations).¹⁰⁴

Thus, said Saba, the modifications of the U.C.C. envisaged by the General Conference look to be a temporary suspension of the application of Article XVII in favor of the developing States. The preceding proposals permit limitations of both scope and time in relation to the projected revision: in scope, the limitation is to developing countries; in time, it is temporary in the sense that its application will operate only during the period of development.¹⁰⁵

Mr. Saba then referred to the fact that the circular letter of December 30, 1966, had been sent out to U.C.C. member States; that its purpose had been interrupted by the resolution taken at Geneva in March 1967, by the Permanent Committee of Berne, asking that the question of revision of Article XVII and the Declaration be delayed until after Stockholm. He added that by June 1967, only five States had answered the letter, but that those which had not yet replied to it would have until March 1968, to do so. The Intergovernmental Copyright Committee, which is the proper organ to prepare and convoke the revision conferences of the revision Convention, would then be in a position to consider revision of the instrument.¹⁰⁶

It has now been announced that the Intergovernmental Copyright Committee will again meet jointly with the Permanent Committee of Berne on December 12-15, 1967, and these meetings seem certain to have a direct impact on the future of international copyright law.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 18.

¹⁰⁶ *Id.*

FORUM

Although the primary purpose of *IDEA* is to communicate the research work of the Institute, it also serves as an educational vehicle for the exchange of informed opinion. The positions taken by the authors of papers and notes in this section are not necessarily those of the Institute. It is hoped that the material published in this section will stimulate researchers to undertake further study of the issues.

The United States Patent System: Has It Come to the End of the Line?

S. DELVALLE GOLDSMITH*

AUTHOR'S NOTE: Since the above was written, and before publication, there has been a meeting of experts at Geneva in October 1967 to consider the text of a Patent Cooperation Treaty (PCT) drafted by BIRPI, the administrative agency at Geneva of the existing industrial property treaties. Notwithstanding opposition to PCT by various United States business and professional associations, the United States delegation at the Geneva meeting apparently expressed general approval for PCT with some minor reservations as to the extent of the part to be played by BIRPI. The meeting then proceeded to consider the draft of PCT, article by article. The

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meeting also decided to create "Working Parties" to consider the items of common search and international filing. It seems doubtful whether these Working Parties (to be organized by BIRPI) will recommend eliminating the interposition of BIRPI for decreasing the complication and expense of international filing.

Prior to the meeting, the draft of an alternative treaty for obtaining the objectives of PCT without the complexity and expense inherent in it and without the need for drastic changes in national laws and practices was prepared by William R. Woodward, General Patent Attorney of Western Electric. This draft, which was not merely an idea or outline but a complete treaty draft covering all the necessary items of PCT, was specifically designed to carry out the "guidelines" approved by the Patent Committee of the National Association of Manufacturers (NAM). However it does not appear from any of the reports now available that this alternative treaty was proposed by the U.S. Delegation or considered at the Geneva meeting, notwithstanding the presence there of observers from NAM including the Chairman of the Patent Committee of that organization.

Also, since this was written, the United States has signed a treaty creating a new and enlarged World Intellectual Property Organization (WIPO) of which BIRPI would be the administrative agency—again contrary to the views expressed by many interested United States organizations.

SUMMARY

THIS PAPER REPRESENTS A SEARCH for the reason for the strong advocacy by the U.S. Patent Office and other government agencies of the Patent Reform Act which proposes to change so many fundamental aspects of our patent system.

The changes proposed for the U.S. patent system seem to be primarily to pave the way for a world patent without any study in depth of whether a world patent (or intermediate steps toward a world patent) would be good for the United States and without regard to the effect of these basic changes in patent-granting philosophy on our inventors, industrialists and consumers.

INTRODUCTION

IN THE RECOMMENDATIONS OF THE REPORT of the President's Commission on the Patent System there were many proposals for basic change in the U. S. patent laws. These proposals have for the most part been embodied in the pending Senate and House bills entitled "The Patent Reform Act of 1967." The final recommendation of the Commission (XXXV) was for an "ultimate" world patent, and consideration of the proposed changes in U. S. law suggests that what the proposers may have had in mind was not so much changes to improve the U. S. law in its operability in our own country, but rather to change the law so as to pave the way for a universal patent.

The above is now confirmed by a news item in *The New York Times* of June 4, 1967, relating to a proposed "Patent Cooperation Treaty" drafted by BIRPI (the United International Bureaux for the Protection of Intellectual Property, at Geneva, Switzerland) "at the suggestion of the United States" and, of course, immediately endorsed by U.S. government officials including J. Herbert Hollomon, then Acting Under-Secretary of Commerce, Eugene M. Braderman, Deputy Assistant Secretary of State for Commercial Affairs, and Edward J. Brenner, Commissioner of Patents. The latter specifically pointed out, according to *The New York Times*, that "many provisions of the patent reform bill now pending in Congress will be essential to full participation by the United States." This seems to clarify the reason for the proposals of the President's Commission for changing fundamental principles of U.S. patent law, viz., that a patent should be granted not necessarily to the first-to-file but in proper cases to the first-to-invent; that the definition of "prior art" should include publication anywhere but not use anywhere; and that a grace period should be provided during which an inventor can file a patent application after testing or describing his invention.

THE PROPOSED CHANGES IN THE U. S. LAW—FOR WHAT PURPOSE?

Interesting further evidence that the changes were proposed to pave the way for a world patent system is provided by the fact that two of the proposed changes—although presented as harmonizing with *existing* foreign laws—do not provide such harmonization but do in fact harmonize with previous international *proposals* not yet in effect and with the Patent Cooperation Treaty not yet published at that time.

Thus the extension of prior art to include public use anywhere in the world does not harmonize with the laws of Great Britain or any of the British Commonwealth countries, West Germany, Japan and Canada but does correspond to the definition of prior art in the unratified "Substantive Patent Law Convention" of the Council of Europe, the proposed Nordic Patent Convention, and the ill-fated draft Common Market Patent Convention.

The situation is similar as regards elimination of the grace period. This is also eliminated by the proposed international agreements which are not in effect anywhere, whereas grace periods are now provided by the laws of West Germany, Japan, Great Britain and Canada. The same effect is secured in many other countries by "confirmation patents" which are granted after publication and use abroad.

Thus, by the Commission's recommendations and the patent reform bills, changes in the U. S. law have been proposed apparently for the purpose of making possible a universal patent without too much regard for their effect on the U. S. patent system, and without any consideration (or, at least, reported discussion) of the good and bad features of a universal patent.

THE FIRST-TO-FILE PROPOSAL

On the first point, and referring only to the first-to-file and extension-of-prior-art proposals it may be mentioned that the U. S. patent system already involves granting a patent to the first-to-file in most cases. However, in a small percentage of cases, the patent is granted to the first to invent who, for acceptable reasons, failed to file first. Naturally, consideration and judgment of these reasons takes time and trouble. But should this cause us to give up a traditional system of inquiry if it is a fair and equitable one? On the other hand it is *essential* to give up this type of inquiry if we are to have a universal patent.

It might be added that, although the Commission's recommendation and proposed bills merely provide a change-over from a first-to-invent to a first-to-file system, the matter is not quite as simple as it might seem. The other countries in the world, which have had first-to-file systems for 50 to 100 years, have developed practices and philosophies compatible with such a system. There is indeed a "race to the Patent Office" (as mentioned by the opponents of a first-to-file system) but at least this is mitigated by the practice of filing with a

much more sparse disclosure than would be used for a U. S. application; and such sparse disclosures are considered proper by the foreign patent offices and courts. In the United States however (according to the current proposals) we are to go over to a first-to-file system with a background of laws, regulations and court decisions based on a system which requires the initial filing of a complete and comprehensive disclosure. Thus, in our effort to secure a universal patent, the revisers are willing to throw out not only the "bath water" of a first-to-invent system but also the "baby" of a long-established American patent policy and philosophy based thereon.

The members of the Commission evidently recognized this difficulty for they proposed, in addition to a first-to-file system, the use of a "preliminary application" for facilitating the "race to the Patent Office" that would ensue. Here they put back some of the "bath water" but without the baby.

The "preliminary application" idea was obviously copied from the British "provisional specification" which has worked well for many years because the British inventor has usually gone to his patent advisor to have a provisional specification carefully prepared and filed. Probably 80 percent of applications filed in Great Britain on British inventions are accompanied by a provisional rather than a complete specification. The manner in which a British "provisional" must be drafted and the relation between what is claimed in a complete specification and what is disclosed in a provisional specification is specified in the law and interpreted by numerous decisions. The "nature of the invention" must be "fairly disclosed" in a provisional specification. A certain degree of expansion is permitted in the "complete." In addition a very general practice has been developed as to filing of a single complete specification combining a number of provisionals.

The above should be contrasted with the proposals of the Commission and the reform bills. According to the Commission a preliminary application "could be prepared by someone having little knowledge of patent law and procedure." Presumably this means that an inventor could write up a preliminary application himself setting out the purposes and advantages of his invention but without disclosing its actual process or structural features. Thinking he was protected, he might use or publish his invention thereby destroying all his rights in the United States and abroad, especially as the reform bills provide that the invention "including every feature recited in the claims therefor" must be disclosed in a preliminary application if the

complete application is to have the benefit of the preliminary application date.

Obviously the above is a far cry from the British "provisional specification" on which the idea of a U. S. preliminary application was presumably based. Considerable time has been spent here in discussing this preliminary-provisional aspect of the proposed revision not because it is so important in itself but because it indicates how damaging it can be to U. S. inventors and to the U. S. patent system to graft a foreign item on it without being able to supply the background in which the foreign item exists. This applies to the first-to-file proposal as well as to the proposal for preliminary applications.

THE EXTENSION OF PRIOR ART PROPOSAL

With regard to the proposal to have public use anywhere in the world as a bar to the validity of a U. S. patent, it would seem that this is one of the best ways to *destroy* the strength of U. S. patents and particularly to provide a weapon whereby an infringer having large financial backing can make investigations in every country of the world and perhaps turn up a similar idea in public use in a remote village of a remote country and thereby destroy a United States patent. This proposal was presumably made not for its intrinsic merit but rather as part of the "world-wide syndrome" and to correspond to provisions in international proposals which have not yet been and may never be put into effect.

It is interesting to note that the Commission did not go along *entirely* with the international proposals which provide that even *oral* disclosure anywhere in the world would be a bar to patent validity. No doubt an attempt to include this in the U. S. law would have set up such a storm of protest that the Commission saw fit to pass by this international proposal notwithstanding their desire for a world patent. However they did go 80 percent or 90 percent of the way by recommending that a "tangible" disclosure anywhere in the world should be a bar.

THE PROPOSAL TO ABOLISH THE GRACE PERIOD

As to the provision of a grace period during which the inventor could use or publish his invention, the suggestion that complete elimination was necessary for harmonization with existing first-to-file

foreign laws is a mistaken conception, probably based on a failure to understand that there is a difference between a grace period for disclosure by the inventor, or derived from the invention, and a grace period for disclosures of third parties. Elimination of the latter type of grace period is essential with a first-to-file system but the first type of grace period is a part of many first-to-file systems such as those of Great Britain, West Germany and Japan. However it is eliminated in the previous international proposals mentioned above or in the Patent Cooperation Treaty.

A UNIVERSAL PATENT—IS IT DESIRABLE PER SE?

Coming now to the question of the desirability of a universal patent, there is no evidence to suggest that both sides of this broad concept were considered either by the Commission in making their recommendations to facilitate a universal patent, or by the U. S. government in their efforts to initiate the so-called Patent Cooperation Treaty.

The first point that must be borne in mind is that a universal patent not only requires complete agreement of the countries as to *novelty* of an invention and *form* of a patent application, but also complete agreement as to *standards of patentability*, i.e. *inventive height*. The former agreement—while not without difficulties—could presumably be achieved and could lead to a common search. This would be advantageous in removing the work of duplicate searches on the same invention by different national patent offices and would lead to a logical simplification of international patent filing. The second type of agreement—as to standards of patentability—is much more difficult to achieve and may not be desirable.

DIFFERENT STANDARDS OF INVENTION

Whereas novelty and the disclosure of tangible or recorded prior art are questions of fact which can be examined by a central search agency, most countries have different standards of patentability as determined by their laws, their court decisions and—most important of all—by what type of inventions and what degree of inventive ingenuity they want to reward with a patent. These standards change from time to time even in a single country, and it is right that they should change—just as our ideas change from time to time regarding business practices, civil rights, and marriage and divorce. In most

countries—at least those such as ours with a common law background—the decisions of the courts change over the years to accord with the thinking of the people.

As an example in the patent field, some years ago a highly subjective test of patentability was thought to have been set by the courts, namely the necessity for a “flash of genius” on the part of the inventor. Since then this has been clarified and the more objective test of activity beyond the normal skill of a workman in the art is followed. Even this is subject to constant review and change—see for example the article by Edmund W. Kitch, assistant professor of law, The University of Chicago, in the April 1967 issue of the *Journal of the Patent Office Society*.

The United States and Germany have very high standards of patentability. France has a lower standard (very little beyond novelty is required). In Great Britain the patentee is probably treated more benevolently than in the United States. In Germany the court will generally look for the essence of the invention as described and give protection for it whereas in the United States and Great Britain the courts will place more emphasis on what is stated in the claims. In many Latin American countries, confirmation patents are granted even where the novelty of the invention has been completely destroyed by publication or use following patenting abroad, the theory being that it may still be desirable to grant a monopoly for encouraging domestic commercial development of the invention.

Is there any reason why these different views and theories should be given up for the sake of having a universal (and probably much more rigid) standard of patentability? The advantage of this, either through a universal patent or the BIRPI proposal, is that it may reduce the cost of multi-country filing. This becomes a substantial item only for large companies filing in 10, 20 or more foreign countries, but even this cost is not large compared with these companies' research, advertising and sales expenses. Individual inventors or smaller companies do not usually indulge in extensive foreign filing, so that savings would be relatively little for them. Moreover the contemplated savings would not be complete even for a large company because translation expense (which often represents a large part of foreign filing costs) and annual fees for maintaining patents in force would presumably be retained as they are under the BIRPI proposal.

Quite apart from different standards of novelty and patentability, there may be other reasons why a universal patent may not be a good idea.

THE MONOPOLY ASPECT OF A UNIVERSAL PATENT

In the first place, every patent is a monopoly and patents are constantly being attacked on this ground notwithstanding the fact that a patent monopoly is granted on the basis of a *quid pro quo*, viz., disclosure to the public of a new invention which might otherwise be kept secret. There are of course other aspects to the beneficial nature of the patent monopoly—e.g., stimulation of research, attraction of “risk capital,” et cetera. Now if the monopoly of a patent restricted to a territory of a single country has been subject to attack, what would be the attitude of anti-monopolists—even the U. S. Department of Justice—toward the super-monopoly of a world patent? Would not such a monopoly be looked upon as bad because of its very size?

Under the present regime of national patents each country can decide for itself whether or not to grant a patent and how to enforce it or control it after grant. Moreover the great majority of inventors will not even try, for one reason or another (cost, if nothing else), to obtain the super-monopoly which a separate patent in every country of the world would provide. With the existence of a world patent, however, inventors everywhere will be tempted, by the apparent simplicity and reduced cost of such a patent, to reach out for the super-monopoly it provides, even if they have no intention of using it constructively.

A UNIVERSAL PATENT AS A DEVICE FOR DOMINATION OF DOMESTIC INDUSTRY

Two seemingly opposite effects of a worldwide patent protection would be unfortunate, especially under present day conditions. As far as concerns a country such as the United States which represents an enormous and prosperous market, the tendency would be for every foreign inventor to obtain a world patent extending to the United States. This means that U. S. industry would be hampered by the existence of thousands of foreign-owned patents many of which might be for “paper inventions” only but which might, in terms of nuisance value, cost our economy millions of dollars. Thus, the 100,000 or so applications filed each year in the USSR and owned by the Soviet Government might all be extended to the United States!

The other side of the coin is that less inventive foreign countries, which are already complaining of U. S. domination and the “technology gap” between the United States and themselves, will be more

than ever dominated by U. S. industry since more U. S. patent monopolies than ever before will extend to those countries.

COMPULSORY WORKING AND ANNUAL TAXES

The next difficulty of a world patent lies in the working requirements that would undoubtedly be present and the annuities or annual taxes that would undoubtedly be charged. In making their proposals for harmonizing U. S. patent laws with foreign patent law, it is surprising that the Commission said nothing about these two aspects of patents which have been subject to repeated discussion during previous considerations of the U. S. patent laws in the committees of Congress and elsewhere. The reason for this may be that U. S. industry is so opposed to working requirements and annual taxes that a suggestion to graft these onto the U. S. patent system might have meant immediate rejection of the reform proposals. But was it right to omit these aspects from consideration where the ultimate idea of a universal patent was so very much in mind?

From the point of view of harmonization alone, practically every important foreign country provides that a patented invention must be "worked" or exploited within the country a few years after grant or the patent will be subject to compulsory licensing or even revocation. On the other hand, general compulsory licensing is anathema to the U. S. patentee, although it has been imposed by the U. S. courts in specific cases of abuse. In any universal patent law there will undoubtedly be a working requirement and we would have to go along with this if we were committed by treaty to a world patent. Moreover there would be special difficulties in establishing suitable working requirements for a world patent. Would working in one country be sufficient or would working be required in each country where the patent is to be effective? What would be the rules about importation from one country to another? These questions would no doubt be resolved by compromise in one way or another with no one view being completely followed. But there would undoubtedly be some working requirements and the U. S. would be the lone wolf crying out against them.

Another difficulty of a world patent is foreshadowed by some of the provisions in the now moribund draft Common Market Patent Convention. Under these, when goods are manufactured under the patent in one country, they can pass freely to all other countries. Thus it is not possible to manufacture the invention in several

different countries on the basis of exclusive licenses. Any licensee manufacturing in one country will be able to export to all other countries covered by the patent. This may be desirable in some circumstances but undesirable in others, and a universal patent will provide no choice.

As regards annual taxes, BIRPI realized that, with their proposals for "loss-leader" filing and examination, the examining patent offices might be operating at a loss. It is interesting to note their comment: "The most 'profitable' revenue of most national offices comes from renewal fees. The (international) system would not touch these fees." This of course takes care of most of the other countries of the world but not the United States where no taxes or fees are collected after grant. Put another way, the push toward a world patent might very well lead to the imposition of annual taxes (as well as working requirements) in the United States, another step in bringing our patent system—as we know it—to the end of the line.

A UNIVERSAL PATENT AS AN ULTIMATE GOAL

Mention may be made that there has been much confusion between a "universal patent" (presumably a "world patent" is meant) and a national patent covering a lot of territory. A speaker at a recent meeting implied that, if it were better to have one U. S. patent instead of 50 state patents, it must be better to have a universal patent instead of separate national patents. It would seem however that different ideas are involved.

No one can deny that, within one political entity, separate patents are undesirable. If the Common Market countries form a true political unity there should be, and undoubtedly would be, a single patent. England, Scotland, Wales and Northern Ireland certainly have a single patent. On the other hand, with the European countries retaining their independence and their separate laws and judicial decisions, it is easy to understand why the proposed European patent has never gotten off the ground. Similarly one can understand the troubles and long delays in the effort to achieve even a Scandinavian or Nordic Patent Convention, notwithstanding the similarity of laws and practices of the countries involved.

A respected authority in the field of business and electronics has pointed out that, with our present state of communications and computer technology—by which information can be stored, retrieved and transmitted around the world in microseconds—the novelty of an

invention could be determined almost instantly, and the physical means are available to accomplish the goal of a universal patent. We may be able to realize the first part of this prediction in the foreseeable future. But what has information storage, retrieval and transmission got to do with setting up universal standards of patentability any more than universal standards of marriage?

For some reason there has been a tremendous push by our government for a universal patent and any principle of our own law that stands in its way seems to be threatened. The recent proposal of BIRPI for a Patent Cooperation Treaty explicitly states that it is not a proposal for a universal patent but it does propose common filing, common novelty requirements and an international patentability certificate, which surely comprise a long first step in that direction. The reason for BIRPI's activity is not hard to find. Obviously a World Patent Office granting a world patent would be a most important factor in the field of patents, possibly handling 300,000 applications or more a year, and BIRPI is the agency having the greatest experience and skill in this field. If BIRPI remained inactive there would be a vacuum which the United Nations or some other international organization having less industrial property background might try to fill. However the reason for our government's activity, which might mean the end of the U. S. patent system as we know it, is harder to understand.

Simplified Interference Practice

HARRY C. BIERMAN*

SUMMARY

THE PURPOSE OF THIS PAPER is to explore the possibility of substantially reducing the cost of conducting patent interferences, shortening the time now necessary to bring interferences to a conclusion, simplifying the steps now provided for by the rules, and eliminating technicalities found in the rules. By virtue of considerable experience over the years in interferences complicated by a number of parties and a number of related interferences in a group, the author has concluded that at least two of the steps in interferences which are burdensome, should be eliminated. They are, first, the motion period and actions provided in connection therewith, and second, the taking of oral depositions. These, in his opinion, entail the bulk of the costs to the parties in the conduct of interferences.

THERE HAS BEEN MUCH DISSATISFACTION with the present interference practice, but such procedure is necessary because of our patent system which grants a patent only to the first inventor. It has been

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recognized that great expense, inconvenience and time are consumed in resolving the question of priority of invention. From time to time alterations have been adopted by the Patent Office seeking to alleviate the burdens. To the extent that such simplifications of procedures have gone into effect, they have served their purpose. But the overall effect has been minor as the fundamental aspects of the procedure still remain and the bulk of the burden still falls on the parties.

In an article appearing in *IDEA*,¹ the shortcomings of the present system are discussed. It also points out that there is some pressure to discard interference procedures altogether due to the unfairness resulting from the many and arbitrary rules. It is suggested that it is desirable to retain the interference idea but that the procedural aspects must be greatly simplified, since abolition of interferences would present other problems. The author proposes that the Patent Office should issue the earliest filed application, which in itself raises the question as to which is truly the application to be issued. This would present a difficult task for the Patent Office since no two applications are identical and they usually contain subject matter and claims which differ materially from the interfering matter.

He suggests further that the junior applicant be rejected on the issued patent, subject to his right to contest priority of invention. The senior party may refuse to contest the priority, but may have the right to raise as a defense that he is the prior inventor. These suggestions do not differ radically from present practice and it is stated that the rigid rules and procedures of the practice must be modified. But no plans or ideas for making the desired changes to accomplish the simplification have been offered.

As far as we are aware, any proposals along these lines have been in general terms only, and no detailed procedures have been described. While the Patent Office has to some extent simplified the conduct of interferences, it has not gone far enough. The Rules pertaining to interferences are Numbers 201 to 286 and the requirements are quite detailed, time-consuming and expensive for the parties, giving rise to many complaints.

It has been stated that the Rules as they now stand have reduced the average time of pendency of an interference to about two years. This does not include the time which becomes necessary if the decision of the Patent Office is contested in the courts. While the time should be as short as possible, the real difficulty lies in the

¹ David A. Tamburro, "Determination of Priority of Invention," *IDEA*, Vol. 10, No. 4 (Spring 1967), p. 537.

complications of procedures and, above all, in the great expense involved because of the many and diverse actions of which the parties may take advantage under the Rules. This may not be a burden on large corporations which have patent departments and which usually can pass costs on to the ultimate consumer of their products, but it is a serious matter to the individual inventor, the small and moderate size manufacturer, the private laboratory, and the closely held or family company, which must go to the independent patent practitioner whose charges exceed the cost of a house attorney for comparable time spent.

We believe that the proposal for simplification of interference procedure which is detailed below, will go a long way to cut the cost of the interference, and lead to an equitable resolution of priority of invention.

PRESENT RULES OF PROCEDURE

Let us first consider the present system of procedure as outlined in the Rules of Practice to show the various steps which must be followed by the parties:

(1) The junior party or parties must file a statement under oath showing the earliest date he (they) will assert. However, if the senior party is a patentee, the junior party is obligated to file affidavits of himself and corroborating witnesses. This entails considerable work by his attorneys but the amount is probably not too great, since the statement is of a preliminary nature.

(2) Then the interference is declared and all the parties file their "Preliminary Statements." To do so requires the attorney to investigate most thoroughly all of the activities of his party, going through all books and other documents, interrogating prospective witnesses, collecting all models of the invention, and laboratory or other records pertaining thereto, and systematizing and chronologically setting forth the complete story beginning with the conception of the invention and including the reduction to practice. Then he must meticulously prepare the Preliminary Statement which is actually the final statement which will govern the future conduct of the case.

(3) After approval of the Preliminary Statements comes the motion period. Many types of motion are available to the parties, such as to dissolve the interference as to all or part of the counts, to amend by adding one or more counts, to substitute other counts for those already in interference, to add one or more applications to the interference or to substitute such application for that already involved, to shift the burden of proof to another party, to add or delete the name or names of one or more co-inventors, or to redeclare the interference. There is also the opportunity for the Examiner to bring motions to dissolve interferences and motions to add parties thereto.

The burden falls on the attorneys to prepare the motions with all

the available arguments and the facts, data and documents which are relied upon in support. Then the opposing party has the opportunity to file a reply in opposition to the motion. The amount of work by the attorneys is quite considerable.

If there are more than two parties to the interference, the amount of work is increased accordingly. Multi-party interferences may involve up to a dozen parties.

Still other motions are available as stated in Rule 243. These would require the same character of preparation as those listed above and briefs are necessary to substantiate the alleged grounds for the motions, all entailing still further expense to the parties.

Then there is the opportunity for the parties to bring petitions for reconsideration or for modification of the decision and, of course, the opposing party has the right to reply. This applies to all of the motions to which the parties are entitled.

(4) When at last all these preliminaries are disposed of, times are set for the taking of testimony. These times are not strictly adhered to as we find that extensions of time are in most cases necessary for a variety of reasons. Certain witnesses may not be available at times, attorneys have differing schedules of work and court appearances, illnesses occur, and various other events may intervene. This drags out the period of pendency of an interference for many months or even longer from the times set originally by the Patent Office.

As each party in turn takes his depositions, they must be attended by the other parties, frequently entailing much travel even back and forth across the country. Then comes rebuttal testimony and the procedure is repeated. Court reporters are necessary so that the expense of this phase is most substantial. There are a number of rules (271-286) which must be carefully followed in connection with such depositions.

(5) Briefs and reply briefs are filed with the Board of Patent Interferences and a final hearing is held, followed by a decision.

(6) Thereafter there is available to the parties a review by the Court of Customs and Patent Appeals, or a proceeding in the District Court.

THE PRESENT PROPOSAL

In the practice as now followed, the most burdensome, most expensive and most time-consuming actions are Number 2, the Preliminary Statement; Number 3, the motions; and Number 4, the oral testimony. In the present proposal, these activities are eliminated. Others are modified. We propose the following:

(1) A claim or claims shall be formulated for purpose of interference by consultation between the Examiner and the Board of Patent Interferences. (Rule 202 may be invoked.)

(2) These claims are to be suggested by the Examiner to each of the prospective parties with time to adopt or reject them, after which the interference is declared. No motions are available to the parties as we

consider that the manner of drafting the claims renders most motions unnecessary. In place of other motions, such as to dissolve the interference, each party can determine for himself whether not to contest the claims, on the theory that they are unpatentable to or unsupported by the other party, since this would be a defense if suit for infringement were brought.

(3) Each party would then bring in its proofs, not by oral depositions, but by AFFIDAVITS. These would include records of various types which the offering party considers essential for the case, facts, dates, names, places, et cetera. In fact, each party would determine for himself how much such proof and of what character is advisable. All this is to be done without any knowledge of his opponent's proof, but knowing only the identity of the other party, so that there is no opportunity to color his proofs.

(4) The parties file in the Patent Office a sufficient number of copies to distribute to the other parties. At this point the Patent Office furnishes such copies to the respective parties, gives them all the data relative to the opponent's application in interference and access thereto. Then each party with full knowledge of his opponent's case has the opportunity to prepare his rebuttal affidavits and proofs. The rebuttal evidence may be filed and served directly by the parties or by the Patent Office.

(5) As in the present practice, each of the parties will file his brief simultaneously with the other parties. Then the parties may file their reply briefs, also simultaneously, and such briefs shall be limited to arguments rebutting erroneous arguments contained in the briefs of the other parties. An oral hearing will be held at which each party may amplify or modify his position in view of the several briefs.

(6) After the decision, there is the present opportunity of going to the courts if a party is dissatisfied with the decision. Here oral depositions may be taken by the party or parties which consider the additional expense warranted by the value of the subject matter.

However, we believe that the proceeding is so equitable and the facts so clearly brought forth by the affidavit-proofs, that no more cases will be taken to the courts than in the past. A party may in relatively few cases feel that his proof could have been better presented by open questioning or cross-questioning of witnesses, in which case he may go to the District Court where he will have such opportunity. Our experience has indicated that the essential facts of conception, experimentation, continual activity and diligence, and reduction to practice can be adequately proven in the proposed manner. If an opposing party believes that there are serious flaws in

the proofs of the offering party, he can voice them adequately in his rebuttal proofs.

TO SUMMARIZE OUR PROPOSAL

The two most burdensome proceedings of the present practice, namely, the motion period and the taking of prima facie and rebuttal testimony are completely eliminated. This would greatly decrease the time and expense of conducting an interference.

It will be no longer necessary to travel to places of examination of witnesses, no reporter fees would be incurred, no transcripts need be made, thus disbursements would be minimized.

We would eliminate the technicalities involved in preparation of Preliminary Statements, although the investigations leading to such preparation would still be necessary. However, the results of the investigations would be used, perhaps with some additional data, for the preparation of the affidavits which take the place of oral testimony.

With the elimination of the motions and the oral testimony, the time for conducting an interference would be greatly reduced also, as experience indicates that these two matters are responsible for most of the delays occurring in interferences. As a result, both the applicant and the Patent Office would be relieved for other duties and activities.

A Cost-Benefit Study of the Domestic and International Patent Systems

ROBERT F. DALE* and JAMES K. HUNTOON**

SUMMARY

AN ATTEMPT HAS BEEN MADE to develop a possible approach to a cost-benefit study of both the domestic and international patent systems using statistical analysis.

In the domestic study, the hypothesis was that corporations with high propensity to patent would experience greater sales growth than corporations with lesser patent propensity. Available data for 375 corporations in 15 industries were used to test the hypothesis. The industries were selected to represent a cross-section, both in type and

EDITOR'S NOTE: *This paper was prepared by a government team. It reflects the cost-effectiveness approach that has become so popular in certain government circles for large-scale evaluation purposes. We are publishing it because it illustrates an application of this type of approach to an evaluation of the patent system.*

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propensity to patent. Data on patent propensity and other factors that may affect growth, such as corporate size and R&D, were for the base year 1955. Sales growth was measured over the ensuing 10 years. It was found that in 12 of the 15 industries there was positive relationship between patent propensity and sales growth. Surprisingly, one of the three industries with a negative relationship was the drug industry. Contingency table and multiple regression techniques were used in an attempt to separate the possible confounded effects of patents with R&D and size.

Recognizing that any interpretation of the relationships as causative is at best hazardous, the resulting statistics were transformed into crude estimates of monetary benefits in terms of sales growth. Several methods of transformation were used resulting in the rather widely varied monetary benefit estimates ranging from \$2.4 billion to \$13.0 billion. Costs of the domestic patent system were estimated at \$0.3 billion with considerable uncertainty due to the inability to estimate objectively what portion of R&D expenditures are stimulated by the patent system. The resulting crude estimates of the benefit-cost ratio of the domestic patent system ranged from 8 to 1 to 43 to 1.

The benefits and costs of the international patent system were estimated on the basis of 14 countries, 13 for which domestic and foreign patenting data were available for the period 1939-1955, and one without a patent system. The 13 countries accounted for about 60 percent of the world patent applications in 1965.

The relation of the national patent propensity and estimated research and development effort with the 1955-1965 growth in the national Gross National Product was examined in contingency table and multiple regression analyses, considering also the 1955 GNP base and a standard of living index. Two independent conservative estimates of the benefit of the international patent system within the 1955 to 1965 period were \$30 billion and \$21 billion annually. The costs of the patent system in the 13 countries were estimated at \$0.6 billion with resulting benefit-cost ratio estimates of 50 to 1 and 35 to 1.

The relation between foreign patenting and subsequent increase in exports to the respective countries of filing was examined by multiple regression for 11 countries. Results indicated that in nine of the 11 cases there was a direct relationship, i.e. the more patents the more subsequent exports.

These tentative results are subject to the validity of the assumptions, the adequacy of the data, and the interpretation of results. They must be considered only as gross ball park estimates.

FOREWORD

The *Report¹ of the President's Commission on the Patent System* has triggered some old questions on its value. At the same time the increasing emphasis in the Executive Branch of the federal government on a planning, programming and budgeting system (PPBS), which includes cost-benefit analysis of government programs, raises some of the same questions.

The authors, both 1966-1967 Department of Commerce Science and Technology Fellows and, by profession, meteorologists with the Environmental Science Services Administration, Department of Commerce, were assigned to the Patent Office with the task of carrying out cost-benefit studies on the domestic and international patent systems. This report represents basically the work of two men over a period of approximately seven months.

Being flung headlong into the economic field to fly before they could walk, the authors quickly became aware that the assigned tasks were fraught with difficulties if not impossibilities. They found the consensus well expressed by Penrose² in the following:

Many writers have tried to prove the usefulness of the patent system by historical evidence regarding the comparative development of different countries with different systems. . . . Unfortunately, it is necessary to reject them since there is no way of showing what would have happened if the history of the patent system had been different. . . . If national patent laws did not exist, it would be difficult to make a conclusive case for introducing them; but the fact that they do exist shifts the burden of proof and it is equally difficult to make a really conclusive case for abolishing them.

Machlup³ and Mayers,⁴ in defending Machlup's report, reiterated much the same opinion, Machlup even concluding that:

No economist, on the basis of present knowledge, could possibly state with certainty that the patent system, as it now operates, confers a net benefit or a net loss upon society.

¹ "To Promote the Progress of . . . Useful Arts" in an Age of Exploding Technology. *Report of the President's Commission on the Patent System*. (Washington, D.C.: G.P.O. 1966.)

² Edith Tilton Penrose, *The Economics of the International Patent System* (Baltimore: The Johns Hopkins Press, 1951), pp. 38-40.

³ Fritz Machlup, *An Economic Review of the Patent System*, Study No. 15 of the Senate Subcommittee on Patents, Trademarks and Copyrights. (Washington, D.C.: G.P.O. 1958), p. 79.

⁴ Harry R. Mayers, Comments at 1960 Annual Public Conference of the PTC Foundation (The PTC Research Institute) of The George Washington University. *PTC J. Res. & Ed. (IDEA)*, Vol. 4 Conference Number (1960).

In the face of these strong conditioning statements the following study has been made to give a possible approach to the assigned task and a preliminary answer to better illustrate the approach.

ACKNOWLEDGMENTS

Discussions were held with many individuals both in private industry and government who were experts in the fields directly or indirectly related to patents, invention, and economic growth. The private sector organizations with which these individuals were associated include The Patent, Trademark, and Copyright Research Institute of The George Washington University, the American Patent Law Association, Radio Corporation of America, Rabinow Electronics Division of Control Data Corporation, and Westat Research. Government organizations include the Office of Business Economics, Bureau of International Commerce, Technical Analysis Division and the Office of Invention and Innovation of the National Bureau of Standards, Federal Trade Commission, National Science Foundation, Census Bureau, and the Patent Office.

Special acknowledgments are due Dr. Mary Holman of The George Washington University, Dr. Arthur Anderson of the Federal Trade Commission, Mr. Thomas McKenna of Westat Research, and Mr. Edward J. Brenner, Commissioner of Patents, and his staff.

In view of the controversial nature of the subject matter, it should be noted that all opinions and interpretations of results are solely those of the authors unless specifically stated otherwise.

INTRODUCTION

A GREAT DEAL HAS BEEN WRITTEN about the relative merits of the patent system. Most of it is qualitative because relatively little, if any, good data are available. Markham⁵ has discussed the need and technique for a good data base, and The Patent, Trademark, and Copyright Research Institute of The George Washington University is carrying this out in its long term "building block" evaluation of the patent system. Sanders,⁶ one of the Institute's principal investigators,

⁵ Jesse W. Markham, James S. Worley, and Dwight S. Brothers, "The Value of the American Patent System: An Inquiry into Possible Approaches to Its Measurement," *PTC J. Res. & Ed. (IDEA)*, Vol. 1, No. 1 (June 1957), pp. 20-56.

⁶ Barkev S. Sanders, "Patterns of Commercial Exploitation of Patented Inventions by Large and Small Corporations, *IDEA*, Vol. 8, No. 1 (Spring 1964), pp. 51-93.

has projected an estimate of \$30 billion as the possible annual corporate profits on corporate products which are patented. Although Sanders does not claim that this \$30 billion may be a good estimate of the benefits of the patent system, he appears to imply that using a similar approach may lead to an acceptable monetary value of patents. The fallacy of such an approach is that there is no standard of comparison or "zero base." It is comparable to attributing the average lifetime earnings of college graduates to a college degree. A far better monetary measure of the value of a college degree would be the difference in the average earnings of college graduates and high school graduates. Gorn⁷ has also made a monetary estimate of the value of the patent system. He estimated that

... American patent owners are deriving monetary gains of somewhat in excess of \$10 billion a year before taxes and in order to obtain this gain, they are risking annually between \$2 billion and \$3 billion in addition to the investment made in producing \$100 billion or more of goods and services which involve the profitable use of patents. While the exactness of these estimates is open to question, the data available show the economic value of patents in the United States to be a very significant and important factor in our present day economy.

The thing that is more open to question is the logic behind the estimates. Gorn used essentially the same approach as Sanders and in so doing ignored the zero base. One might as well attribute all corporate profits on products sold which have the Good Housekeeping "Seal of Approval" to the seal itself. One of the dangers here has been succinctly stated by Denison,⁸

Enthusiasts could stress the potentialities for the future of their favorite growth element, and ascribe to it a crucial role in past growth, quite uninhibited by the claims of others and the necessity that the sum of the past contributions of the various elements equal the growth rate that this country has actually experienced.

Although both Sanders' and Gorn's estimates were concerned with the domestic patent system, the problem of establishing a zero base applies to both the domestic and international patent system evaluations. There is no absolute zero base in the domestic study because there has been a patent system in effect essentially during the entire history of the United States. In the international study, there is a

⁷ Elmer J. Gorn, "Economic Value of Patents," *The Encyclopedia of Patent Practice and Invention Management*, (New York: Rheinhold Publishing Co. 1964), pp. 221-227.

⁸ Edward F. Denison, "The Sources of Economic Growth in the United States and the Alternatives Before Us," Supplementary Paper No. 13 (New York: Committee for Economic Development, January 1962), 297 pp. \$4.

“pseudo zero base” but the effect of other factors such as culture, climate, and economy seriously interact and impair its use. In this study a relative zero base, or more correctly a zero-patent base, concept has been used.

No claim is made that this study proves that the patent system provides a net economic benefit. There are so many uncertainties and so much inadequate data that the only claim made is that the statistical consistency of the data sample gives substantial evidence that the patent system is making a positive contribution to the domestic and world economies.

THE DOMESTIC PATENT SYSTEM

An Approach to the Determination of Benefits

On the question of the benefits of the domestic patent system (hereafter referred to as DPS), one has to reply with a question of benefits to whom. To avoid becoming engulfed in a morass of conflicting confusion, the authors arbitrarily defined the benefits of the DPS as the contribution of the DPS to the nation as a whole. This permitted dispensing with such details as royalties (benefits primarily to inventors) and licensing fees (benefits primarily to corporations) and directing attention to the gross features of the problem. This is diametrically opposed to the “building block” approach of The Patent, Trademark, and Copyright Research Institute, but it is easily justifiable considering the time and resources available for this study. Further, the contribution of the DPS to the nation as a whole was defined as that portion of the growth in corporate net sales attributable to the DPS. The DPS was defined to exclude all international aspects of patents, such as patents issued by other countries to U. S. nationals and patents issued by the United States to foreign nationals, even though they affect the U. S. economy.

The basic hypothesis was that corporations with strong patent position at a point in time would experience greater sales growth in the future than corporations with weaker patent positions. The rationale in simple terms was that the nation as a whole purchases those things considered worth the cost. By these purchases, and the expectation by corporate management that the public will continue to purchase, risk capital is obtained, new plants and equipment are built, and new jobs are created. This growth stimulates growth in peripheral

areas and the entire nation benefits. One of the criteria for corporate management's decision to "go" or "no go" on a new product is the ownership of, or licensing rights to, the 17-year patent monopoly for the product under consideration. Corporate management is more willing to take a capital risk with a patent than without it, other things being equal.

There are many factors besides patents that contribute to corporate sales growth, although there is no general agreement as to what these factors are and even less agreement on the relative contribution of each. Certainly some of the factors are consumer demand, corporate credit rating, management capability, marketing techniques, quality of research and development, and entrepreneurship. Inflation and corporate acquisitions may increase sales but are not really growth. Just how all these and other factors interact and contribute to growth will continue to be probed by economists for years to come. With only a few months to work on the problem, the consistency of gross statistics relating patents to sales growth has been relied upon as the main support for the hypothesis.

If there is any question as to whether corporate management makes "go" or "no go" decisions in part on patent rights, there are many case studies that show predominantly affirmative answers. This was discussed with John Dessauer, Executive Vice President of Xerox Corporation, and Jacob Rabinow, President of Rabinow Electronics Division of Control Data Corporation, and holder of 175 patents. Both of these well-known entrepreneurs insisted that patent protection is a necessary prerequisite for product innovation. On the other hand Sanders⁹ points out that 70 percent of corporate replies to a survey indicated they would manufacture and market even without patent protection.

Numerous studies have been carried out by economists interested in the general area of invention, innovation and economic growth. Scherer,¹⁰ Schmookler,¹¹ Schmookler and Brownlee,¹² and Griliches and Schmookler¹³ have all made statistical studies using in general the

⁹ Barkev S. Sanders, Joseph Rossman and L. James Harris, "Attitudes of Assignees Towards Patented Inventions," *IDEA*, Vol. 2, No. 4 (December 1958), pp. 463-504.

¹⁰ Frederic M. Scherer, "Firm Size, Market Structure, Opportunity and the Output of Patented Inventions," *American Economic Review* (December 1965), pp. 1097-1125.

¹¹ Jacob Schmookler, *Invention and Economic Growth* (Cambridge: Harvard University Press, 1966.)

¹² Jacob Schmookler and Oswald Brownlee, "Determinants of Inventive Activity," *American Economic Review Proceedings*, Vol. 53 (May 1962), pp. 165-176.

¹³ J. Griliches and J. Schmookler, "Inventing and Maximizing," *American Economic Review*, Vol. 53 (September 1963), p. 725.

same variables used in this study. Their hypotheses, however, are quite different—in brief, that investment leads to invention. They used annual corporate sales or value added (as a measure of investment) and found high correlations with the number of patents issued (as a measure of invention) two to four years later. Although Scherer, in particular, discussed the problem of scale—namely that most corporate data are highly correlated with size—he regressed patents on sales four years earlier and used the resulting correlation to support the hypothesis. Schmookler used very small differences in R^2 values to support the hypothesis.

Scherer also states that

. . . no attempt is made to test the older but still controversial hypothesis that the expectation of a future monopoly position (e.g. through a patent grant) is necessary before risk capital will be committed to invention or development.

This “older hypothesis” is more similar to that used in this study. Only one of the contemporary economists was found to have worked in this direction. Minasian¹⁴ correlated R&D expenditures as a percentage of sales with profitability about seven years later and concluded that “. . . beyond a reasonable doubt causality runs from research and development to productivity and finally to profitably.”

Benefit Analysis Data

Since propensity to patent is different in different industries, it was essential to group corporations into appropriate categories. For example, if corporations in industry A with patent propensity P and sales growth G were grouped with those in industry B with patent propensity $2P$ and sales growth $G/2$, the mixed populations might conceal any true effects of patents on economic growth. Even if only corporations within industry A are compared, there are still difficulties due primarily to the tremendous corporate diversification trend in the past decade or so. For example, 25 percent of a large electrical firm's patents are chemical patents.

Industry groupings in this study were taken from *News Front*¹⁵ which listed 3,000 leading U. S. manufacturing corporations in about

¹⁴ J. R. Minasian, “The Economics of Research and Development,” *Rate and Direction of Inventive Activity: Economic and Social Factors*, Conference of the Universities-National Business Committee for Economic Research (Princeton, N.J.: Princeton University Press, 1962), pp. 93-141.

¹⁵ *The News Front Directory of the 3,000 Leading U. S. Corporations* (New York: Year Inc., 1960.)

60 Standard Industrial Classification (SIC) groupings. The SIC groupings were reduced to 15 for the study sample representing a cross-section of industry and a broad range of propensity to patent. The automobile industry was purposely excluded because of extensive cross-licensing in the industry. The aircraft and electronics industries were also excluded since a substantial portion of their sales are to the federal government and they are heavily supported by government R&D funds. An additional 13 SIC categories were eliminated because the number of corporations in these groupings was too small (generally 20 or less) to be useful in a statistical analysis. Adequate initial sample size was particularly important since the sample was reduced by corporate mergers, acquisitions, and name changes that occurred between 1955-1965, the growth period studied.

The 15 SIC industry groupings selected are listed in Table 1 with summary data on each industry based on the corporations in the sample. There were 649 corporations in the original *NewsFront* listings of the 15 SIC categories, but this number was reduced to 375 in the process of successfully identifying the same corporations in both the 1956 and 1966 issues of *Moody's Industrial Manual*. All corporate data except patents, R&D expenditures, and acquisitions were obtained from these manuals which contained 1955 and 1965 data. In general, the 649 corporations in the 15 industries accounted for about 75 percent of the sales of the industries in 1958. Although the 375 remaining corporations represent a substantial reduction in number, it is fairly certain that they still account for a substantial majority of the sales in the industries because the corporations which dropped from the sample were generally small. The total sales of these 375 corporations were over \$66 billion in 1955 and \$121 billion in 1965 which is some indication of the tremendous monetary size of corporations within the sample.

Some of the industry samples had far fewer corporations than desirable for statistical analysis, but they represented all data readily available in these industries. The lumber industry, which had the smallest sample ($N=10$), was included because of its low propensity to patent (0.29 patents per million dollar 1955 sales).

The 1965 adjusted sales (col. 5) on Table 1 represent 1965 net sales adjusted for corporate acquisitions. Growth in sales was sometimes strongly influenced by corporate acquisitions. It was necessary either to adjust a corporation's patent position by the number of patents held by the company acquired or to adjust the 1965 sales of the acquiring company. The latter alternative was chosen since data on corporate

TABLE 1

INDUSTRY GROUPINGS AND CHARACTERISTICS

Industry (Key Words Only)	SIC Numbers (1)	Number of Corporations in Sample (2)	No. Patents per \$ million of 1955 Sales (3)	1955 Sales (\$ Millions) (4)	1965 Adjusted Sales (\$ Millions) (5)	% Sales Growth 1955-1965 (9)
Tobacco	211-213	16	0.01	3,377	5,343	58
Lumber	241	10	0.29	709	1,470	107
Paper	261, 262, 266	45	0.43	3,722	7,538	103
Chemicals	281	27	2.70	7,767	14,625	88
Drugs	283	21	1.39	1,776	4,415	149
Soaps, cosmetics	284	18	0.34	1,809	4,468	147
Petroleum	291-295	24	0.81	22,293	38,841	74
Concrete, gypsum	326	17	1.19	1,277	1,981	55
Nonferrous metal	333	21	0.36	4,359	6,228	43
Fabricated metal	341-349	54	1.26	4,219	6,662	58
Farm machinery	352	25	1.69	3,691	7,874	113
Electrical machinery	361	31	3.74	6,614	11,801	78
Radio, TV	365	16	4.42	1,995	4,168	109
Instruments	383	27	4.69	2,148	4,438	107
Miscellaneous	391-398	23	1.81	872	1,301	49
Totals		375		66,628	121,153	

acquisitions were available from the Federal Trade Commission. The Commission keeps very detailed acquisition data on the 200 largest U. S. corporations and less detailed but still useful data on smaller corporations. In some cases, it was known only that a company or a portion thereof was acquired without having the actual monetary data. However, it is believed that those acquisitions for which actual monetary data were not available were in general relatively small. The Commission's data are concerned primarily with acquired assets, and it was necessary to make a proportionate correction to sales data. It was assumed that sales growth due to acquisitions was in the same proportion to total sales growth (1955-1965) as acquired assets were to the increase in total assets (1955-1965). This sales growth due to acquisitions was subtracted from the actual 1965 net sales to get 1965 adjusted sales. Acquired assets data were available on 101 of the 375 companies. This resulted in total adjustments of \$7,177 million to 1965 actual net sales.

The independent variable of primary interest in this study was the number of corporate patents in force on December 31, 1955 as a measure of corporate patent position. Since patents are valid for 17 years, this includes patents issued between January 1, 1939 and December 31, 1955. The primary reason for choosing 1955 as the base year was that corporate patent counts as of that time were available for over 600 corporations from Federico's study¹⁶ conducted for the Congress. This essentially forced the use of the 1955-1965 period in which to measure sales growth, but this is an acceptable time period. Recent studies, e.g. Enos,¹⁷ have shown that it takes about 14 years on the average to go from invention to the initial pay-off stage, but there is, of course, considerable variation about the mean.

The corporate patent counts do not include patents assigned to a corporation following the date of issue. The error due to this factor should be small, however, since Federico estimated that less than 3 percent of all patents issued are not assigned at the time of issue.

A more serious problem in using number of patents as a measure of patent position is the implicit assumption that one patent is as significant as another. It would be difficult to get much further from the truth in comparing selected patents. Nevertheless, in the aggre-

¹⁶ P. J. Federico, "Distribution of Patents Issued to Corporations (1939-55)," Study No. 3 of the Subcommittee on Patents, Trademarks and Copyrights (Washington, D.C.: G.P.O. 1957.)

¹⁷ John L. Enos, "Invention and Innovation in the Petroleum Refining Industry," *Rate and Direction of Inventive Activity, Economic and Social Factors*, Conference of the Universities-National Business Committee for Economic Research (Princeton, N.J.: Princeton University Press 1962), pp. 307-308.

gate, especially within industries, it is believed that numbers of patents are a reasonable measure of relative strength. The patent count for a corporation included, of course, not only patents which were actively utilized but also defensive patents.

Another source of error in the patent measurement relates to purchased technology in the form of licensing. Patents which are owned but not worked by Corporation A and instead are licensed to Corporation B with exclusive rights of manufacture and sale should be counted in the portfolio of B rather than A. Since there were no data readily available on this, it was assumed that the licensing is randomly distributed among the corporations in this study. Bangs and Creed,¹⁸ however, estimated the domestic licensing rate at about 18 percent and indicated that large corporations license at a greater rate than small corporations. Although they found relatively few cases where licensed patents were more numerous than the owned patents, three corporations in three different industries reported they licensed more than 10 times as many patents for their use as they themselves owned.

The effect of patents on economic growth is confounded with R&D effort. In fact, the economic studies cited earlier have used patents as a measure of R&D output. Therefore, considerable effort was made to obtain corporate R&D expenditures to help in identifying the portions of sales growth attributable to patents and R&D. This was done even though the use of corporate R&D expenditures is not believed to be a satisfactory measure of effective R&D. The R&D data include the same pitfalls as measuring patent position by numbers of patents. There is an implied assumption that \$1 of R&D in one corporation equals \$1 in another corporation.

Due to the questionable accuracy of R&D data, two R&D data subsamples were used. One consisted of corporate R&D data published in several publications¹⁹ covering the time period 1959-1964. Data for one or more of these years were available for 174 of the 375 corporations in the sample. The second subsample came from the Census Bureau. This consisted of R&D expenditures in 1958 for 210 of the 375 corporations. For this sample the statistical analyses were carried out for us by the Census Bureau with only the broad result made available so as to conform to confidentiality regulations. In both

¹⁸ Robert B. Bangs and John F. Creed, "Tax Experience of American Corporations Owning Numerous Patents," *PTC J. Res. & Ed. (IDEA)*, Vol. 5, No. 3 (Fall 1961), pp. 191-213.

¹⁹ These data were published primarily in various issues of *News Front* magazine from 1959 to 1964 and in the November 14, 1966 issue of *Standard and Poor's Outlook*.

subsamples, R&D expenditures as a percentage of sales in the appropriate year were determined, and these percentages were applied to 1955 sales to estimate 1955 R&D expenditures.

The Analysis of Benefits

Two different statistical approaches have been used on the sample data better to exploit the data and confirm the answers. The first method was a contingency table approach, and the second was multiple regression analyses.

The contingency table approach included dividing the corporations within an industry into two groups on the basis of rank in propensity to patent, the number of patents in force on December 31, 1955, per million dollars of 1955 net sales. If the industry sample contained an even number of corporations, then each group had the same sample size. If the number was odd, the median value corporation was arbitrarily placed in the group with low propensity to patent. The one primary exception to this was in the tobacco industry in which 10 of the 16 corporations actually held no patents so that the separation of necessity consisted of six in the high propensity to patent (hereafter designated HPP) group and 10 in the low propensity to patent (LPP) group. The percentage growth in sales (adjusted for corporate acquisitions) was then computed for each group as a whole for the period 1955-1965. The change in percentage share of the market (where the market is the total sales of the industry sample) from 1955-1965 was also computed for the HPP group. The value for the LPP group of course would be equal but opposite in sign.

The results are shown in Table 2 for the 15 industry samples being studied. Median values of propensity to patent for each industry, the criteria for the HPP-LPP grouping, are also shown (col. 2). In 12 of the 15 industries, the HPP group (col. 3) experienced greater sales growth than the LPP group (col. 4). In the same 12 industries, the HPP group increased its percentage share of the market in the 10-year period (col. 5).

Since one or two corporations with very large or very small growth in one group can have an over-riding effect, i.e., cause its group to have greater or less growth or a positive or negative change in percentage share of the market, an examination was made of the extent to which a majority of the corporations in the industry were contributing to the result obtained. This was accomplished by computing the industry sample growth and then determining whether each corporation's

TABLE 2

CORPORATE SALES GROWTH AND PROPENSITY TO PATENT

Industry	SIC Numbers (1)	Propensity to Patent (Median Value) (2)	% Sales Growth 1955-1965		HPP Change % Share Market 1955-65 (5)	Combined % HPP-Above Normal Growth and LPP-Below Normal Growth (6)
			HPP (3)	LPP (4)		
Tobacco	211-213	0.00	62	49	+1.8	69
Lumber	241	0.02	165	93	+5.4	30
Paper	261, 262, 266	0.03	112	94	+2.2	49
Chemical	281	2.00	107	68	+5.2	74
Drugs	283	0.80	116	176	-6.0	33
Soaps, cosmetics	284	0.25	171	134	+3.9	50
Petroleum	291-295	0.35	80	39	+3.0	50
Concrete, gypsum	326	1.00	78	29	+7.9	65
Nonferrous metal	333	0.30	58	31	+4.8	67
Fabricated metal	341-349	0.95	69	47	+3.6	61
Farm machinery	352	1.40	102	121	-2.2	60
Electrical machinery	361	2.30	77	95	-0.8	58
Radio, TV	365	0.65	127	37	+6.8	81
Instruments	383	2.60	126	67	+6.3	59
Miscellaneous	391-398	1.50	92	31	+8.5	65

growth was above or below that of the respective industry. For example, this distribution for the chemical industry (SIC 281) is shown in the following contingency table.

CHEMICAL CORPORATION SALES GROWTH 1955-1965

	<u>Above</u>	<u>Below</u>
HPP	10	3
LPP	4	10

In general the hypothesis of a strong patent position leading to greater sales growth is more fully supported when the sum of corporations with HPP and above normal growth, and with LPP and below normal growth as a percentage of the total is greater than 50 percent. In the case of the chemical sample above, this percentage is 74 percent (20 of 27). The appropriate percentage value for each industry is included in col. 6. For the most part (12 of the 15 industries) the value is 50 percent or more but the cases do not match exactly with the preceding results which used a weighted mean to obtain respective HPP and LPP industry growths. The main anomalies are (1) the lumber industry in which HPP corporations grew more than LPP corporations but only 30 percent of the corporations contributed to this result; and (2) the farm machinery and electrical machinery industries, in both of which HPP corporations grew less than LPP corporations but in which 81 percent and 59 percent respectively of the corporations supported the reverse relationship.

While the relationships summarized in Table 2 may not be causative, the probability that 12 or more of the 15 industries would have HPP corporations growing more than those with LPP by chance is only 1.8 percent based on a binomial distribution. Although this is rather impressive evidence of patent benefits, the relation may be due to patents being highly correlated with the true causative variables. Two such possibilities were examined—corporate size and R&D.

Using 1955 net sales as a measure of size for the reasons enumerated by Scherer,²⁰ each of the 15 industry samples were divided into two groups each (large and small) in a manner identical to that described for patents except that the ranking was according to decreasing 1955

²⁰ F. M. Scherer, "Size of Firm, Oligopoly, and Research: a Comment," *Canadian Journal of Economics and Political Science*, Vol. 31, (1965), pp. 256-266.

net sales. Contingency tables were then determined according to size (large and small) and 1955-1965 sales growth above and below the industry growth. In order to make a statistical significance test, the 15 industry contingency tables with the entire 375 corporations were then combined to obtain the following contingency table:

CORPORATION SALES GROWTH 1955-1965

<u>1955 Sales</u>	<u>Above</u>	<u>Below</u>
Large	85	96
Small	100	94

The Chi-square value of 0.6 (one degree of freedom) was not significant. The large corporations did not grow significantly more or less than the small corporations, and therefore size did not account for the patent-growth relationship in the sample.

All 375 corporations were combined again but relating them this time to patent propensity instead of sales size as shown in the following contingency table:

CORPORATION SALES GROWTH 1955-1965

	<u>Above</u>	<u>Below</u>
HPP	105	76
LPP	80	114

Chi-square was 9.85, significant beyond the .01 level. HPP corporations grew significantly more than the LPP corporations. This result is not due to a size factor, since patent propensity—patents per million dollar sales—is a measure largely independent of size.

There appears to be a rather widely held belief that the patent system helps small corporations stay alive and even grow in the face of large corporation competition. In order to examine this the data in the above contingency table were subdivided into two groups, one for large and one for small corporations. The Chi-square values for patent propensity versus growth were 5.5 for large corporations and 6.5 for small corporations. Although there is a slight tendency for small

corporations in the sample to prosper more through the patent system than large corporations, the difference is not significant. The more significant inference, however, is that, if a corporation has a high patent propensity, it will in general grow more than if it had a low one, regardless of whether it is a large or small corporation. However, it should be recognized that the study sample of 375 corporations is quite likely biased towards large corporations and small corporations which have been successful. Small corporations in this study actually are more likely to be intermediate sized corporations when looking at the full spectrum. The financial data source used did not include companies which do not have publicly owned stock, and most of these companies tend to be small.

Undoubtedly the important factor correlated with patent propensity, and therefore possibly responsible for the significant relationship between patents and growth, is R&D. In order to examine this, corporations within each industry were ranked by published R&D expenditures as a percentage of sales. When data for more than one year for one corporation were available, they were averaged. It should be remembered that published R&D data were for periods well after the 1955 base period and within the 1955-1965 growth period. Corporations within each industry were divided into two groups as before with a high R&D group (HRD) and a low R&D group (LRD). Published R&D data were available for only 174 of the 375 corporations. Furthermore four of the 15 industries (tobacco, lumber, soaps and miscellaneous) had R&D subsample sizes too small to use which further reduced the sample to 157 corporations. The resulting distribution is shown in the contingency table below:

CORPORATION SALES GROWTH 1955-1965

	<u>Above</u>	<u>Below</u>
HRD	43	34
LRD	35	45

Although the distribution pointed toward a positive R&D-growth relationship, the Chi-square value of 1.8 for this reduced sample was not significant. A contingency table for propensity to patent with the same R&D subsample of 157 corporations is shown below.

CORPORATION SALES GROWTH 1955-1965

	<u>Above</u>	<u>Below</u>
HPP	44	33
LPP	34	46

The value of Chi-square was 2.7, slightly greater than for R&D, and significant at the 10 percent level.

From this analysis, it appears that the 1955 patent position and the estimated 1955 R&D expenditures may be about equal factors in affecting 1955-1965 corporate growth with possibly a slight edge for patents. In order to examine this further, the 157 corporations in the R&D subsample were grouped by commonality of high and low values of patent propensity and percentage R&D as shown below:

CORPORATION SALES GROWTH 1955-1965

	<u>Above</u>	<u>Below</u>
HPP and HRD	29	22
LPP and LRD	20	34

With this grouping of 105 of the 157 corporations, Chi-square was 3.4, greater than for either patents or R&D alone and significant at about the 7 percent level. This suggests that there was a growth pay-off for corporations in the sample which both invested heavily in R&D and patented extensively on the resulting inventions, other things being equal. A contingency table for the remaining 52 corporations with noncommonality is shown below.

CORPORATION SALES GROWTH 1955-1965

	<u>Above</u>	<u>Below</u>
HPP and LRD	15	11
LPP and HRD	14	12

Chi-square was 0.29. An arbitrary but seemingly reasonable conclusion from the foregoing was that the relationship between patent propensity and sales growth may be accounted for about equally by patents and by R&D. Therefore, arbitrarily half of the growth associated with patent propensity might be attributed to R&D.

Up to this point, comparison of HPP versus LPP has been carried out only within industries. This can also be done between industries using patent propensity and growth data from Table 1 to divide the industries into two groups. This is shown in Table 3. The seven HPP industries grew 96 percent and the eight LPP grew 74 percent. Or, from the viewpoint of change in percentage share of the sales market, the seven HPP industries had 37.3 percent of the market in 1955 and 40.1 percent in 1965, an increase of 2.8 percent.

It should be pointed out that, just because 12 of the 15 industries showed a positive relationship between growth and corporate patent propensity, it does not necessarily follow that on an industry basis there should be the same relationship. This is because demand becomes a strong factor in interindustry growth. For example the lumber industry had the second lowest industry propensity to patent with the fifth highest percentage growth. Lumber is basic to the needs of people and demand is high regardless of degree of innovation. Similarly the rather basic paper and soap industries have low patent propensity but high growth. Thus the fact that on an interindustry basis the relationship was favorable to patents may be more interesting than significant. What may be unusual is that the three industries (drugs, farm machinery, and electrical machinery) which showed a negative growth relationship with patent propensity on a within-industry basis are in the HPP group on an interindustry basis which shows a positive effect of patent propensity.

So far the question of the negative relationship between corporate patent propensity and sales growth in the drug, farm machinery, and electrical machinery industries has not been discussed. The negative relationship may be most surprising in the drug industry, which relies heavily on invention and the patent system. These relations could come about in at least three ways: (1) the results of this entire study are not meaningful because of questionable assumptions and lack of adequate data; (2) the results of this entire study are in general meaningful but not in these three industries because of special circumstances; and (3) the results of this entire study are meaningful and these industries are growing in spite of the patent system.

The first explanation is rejected, not because it is impossible, but because it appears unlikely in the face of the rather consistent

TABLE 3

INDUSTRY SALES GROWTH AND PROPENSITY TO PATENT

HPP Industries				LPP Industries			
Industry	Patents per \$ million of 1955 Sales (1)	1955 Sales (\$ Millions) (2)	1965 Adjusted Sales (\$ Millions) (3)	Industry	Patents per \$ million of 1955 Sales (4)	1955 Sales (\$ Millions) (5)	1965 Adjusted Sales (\$ Millions) (6)
Instruments	4.69	2,148	4,438	Fabr. Metal	1.26	4,219	6,662
Radio, TV	4.42	1,995	4,168	Concrete	1.19	1,277	1,981
Electrical machinery	3.74	6,614	11,801	Petroleum	0.81	22,293	38,841
Chemicals	2.70	7,767	14,625	Paper	0.43	3,722	7,538
Miscellaneous	1.81	872	1,301	Nonfer. Metal	0.36	4,359	6,228
Farm machinery	1.69	3,691	7,874	Soaps	0.34	1,809	4,468
Drugs	1.39	1,776	4,415	Lumber	0.29	709	1,470
				Tobacco	0.01	3,377	5,343
Total		24,863	48,622			41,765	72,531

statistics. The assumptions and data are far from perfect, but if the errors related thereto are distributed more or less randomly, the results should not be significantly affected.

The second explanation is certainly possible. For one thing, although steps have been taken to avoid comparing corporations in unrelated types of business, these industries may have a greater mix of "apples and oranges" than the other industries. On a cursory glance it appears that some of the LPP drug corporations may be more diversified (e.g. in the candy business) than their HPP counterparts. It is also possible that the sample of corporations in the drug industry is too small to be representative. Certain foreign drug corporations which have a sizeable share of the U. S. market (e.g. Ciba, Hoffman La Roche) are not included because the *News Front* listing contained only U. S. manufacturing corporations. Also, certain major drug manufacturers are subsidiaries of other corporations and as such are not included in the drug sample but may be included in other industry categories (e.g. Squibb is a subsidiary of Olin Mathieson which is included in the chemical industry sample).

Another possibility is major error in the patent data. For example, initially Warner-Lambert Co. did not appear to have patents, but this was because corrections had not been made for corporate name changes. Another possibility is that the assumption of equal significance of patents produces greater error in these industries than in others. In the farm and electrical machinery industries the negative effect may be caused by several LPP corporations with very large growth. A majority of corporations in both industries supported a positive relationship.

The third explanation is also possible, especially in the drug industry, because the same types of errors and special circumstances described in brief terms in the previous paragraphs may apply equally well to the 12 industries which showed a positive relationship. Also the growth-R&D relationship in the drug industry was negative. Of the 14 corporations in the drug industry sample for which published R&D data were available, the seven HRD corporations grew 131 percent compared to 202 percent by the seven LRD corporations.

The problem cannot be resolved within the scope of this study and perhaps not at all. Suffice it to say that the statistics point towards drug industry growth not being supported by patents. Corporations in this sample of the drug industry with a high propensity to patent grew 116 percent whereas those with a low propensity to patent grew 176 percent in the 10-year period. Furthermore these results were not caused by only a few corporations which experienced unusually large growth. Instead 67 percent of the corporations in the sample were

either HPP corporations with below industry growth or LPP corporations with above industry growth. The HPP corporations also experienced a 6 percent decrease in share of the market. Although this certainly does not prove conclusively that the drug industry would be better off not to patent, it does seem to put the onus on those who may be interested to present evidence to the contrary.

Up to this point in the study, benefits of the patent system have been analyzed on the basis of a patent position differential assuming all other factors were randomly distributed. Also insofar as possible, an examination was made as to what extent the relation between patent propensity and growth was due to a few other measurable factors correlated with patents. It was found that essentially none of the relationship was due to size, but that about one-half of it might be due to R&D. In order to examine this problem of the contribution of other factors more clearly, and if possible to obtain another separate measure of benefits, multiple regression techniques were employed as described in the following. This was done fully recognizing the problem that many of the industry samples were very small.

In the following discussion of growth models using multiple regressions the following notation for variables will be used:

S65A-S55, the sales growth (dependent variable)

S55, the 1955 sales base

K, the 1955 plant and equipment base

L, the 1955 employee base

P, the 1955 patent base

RD, the published 1959-1964 R&D adjusted to 1955 base

RDC, the 1958 unpublished R&D adjusted to 1955 base

Data involving all 375 corporations are presented in Table 4 for two models, S65A-S55 on S₅₅, K, L, P and S65A-S55 on S55, P. It should be noted that all the independent variables, including patents, are positively correlated with size. Consequently simple correlation coefficients of the various independent variables with S65A-S55 are not shown because they are not meaningful. The R² values are shown only to give a general picture of the dependent variable variance associated with the different models. No significance should be attached to the several extremely high R² values because in all likelihood these are caused by highly skewed distributions or outliers, i.e. one or two corporations may be very large and the remainder small, resulting in essentially a two-point regression. *The b values for patents, however, are believed to have significance when consistent in the two models for*

each industry. For the most part the b 's were consistent. The major exceptions were soaps, cosmetics, radio and TV. With only a few exceptions the b 's are significant at the 30 percent probability level. This is a higher probability of the Type I error, α , than usually used. It was selected as a matter of convenience and to decrease the probability of Type II error, β , which is quite large with low α . Moreover, although the samples were small in number, generally they represented a substantial majority of industry sales.

There is a surprising consistency between these results and those in the contingency table approach. In particular, drugs, farm machinery, and electrical machinery, which were all negative in the contingency table approach, were also consistently negative in these regression models. The remaining industries, which were all positive in the contingency table approach, are generally positive in the regression models with the exceptions being tobacco and soaps, cosmetics. The

TABLE 4

COEFFICIENTS OF DETERMINATION AND PATENT PARTIAL REGRESSION
COEFFICIENTS FOR TWO LINEAR SALES GROWTH MODELS

Industry	S55, K, L, P		S55, P	
	R ²	b	R ²	b
Tobacco	.42	-225.0*	.39	-193.0*
Lumber	.80	17.2*	.51	15.6*
Paper	.78	13.9*	.71	10.3*
Chemical	.82	1.4*	.75	0.6*
Drugs	.87	-1.0*	.76	-1.4*
Soaps, cosmetics	.98	-8.3*	.92	8.4*
Petroleum	.94	1.7*	.86	1.8*
Concrete	.84	3.8*	.81	4.6*
Nonferrous metals	.66	0.6	.50	1.1
Fabricated metal	.73	1.1*	.66	1.2*
Farm machinery	.84	-1.2*	.82	-1.1*
Electrical machinery	.99	-0.7	.98	-1.2*
Radio, TV	.88	4.1*	.85	0.4
Instruments	.90	0.3	.84	0.4*
Miscellaneous	.66	1.1*	.62	0.9*

* Significant at .30 level

fact that the contingency table approach presents more consistent data supporting the patent-growth hypothesis than the multiple regression approach may be due to two factors: (1) the contingency table approach is less subject to the error involved in the implicit assumption of equivalence of patents since it simply has two categories of patent propensity; and (2) the contingency table approach is less subject to the effects of skewed distributions.

In general terms the multiple regression models produce results comparable to the contingency table approach. The partial regression coefficients for patents are generally consistent, positive and independent of size factors. To examine the question of degree of independence from R&D, the two R&D subsamples mentioned earlier were used. The first (RD) consisted of published R&D data and the second (RDC) was unpublished data internal to the Census Bureau. In general RDC samples within industries were larger than the RD samples, so that for the latter one less independent variable was used in the multiple regression models, but there was at least one size variable in all models.

The patent and R&D partial regression coefficients for several models of each of the subsamples are shown in Table 5. Arbitrarily limiting analysis to only those industries with at least 10 corporations, industry samples were large enough in only 11 of the 15 industries for the published subsamples and in only nine of the 15 industries in the unpublished subsample. Although there was some consistency of *b* values for both patents and R&D between models within a subsample, there was a considerable instability of *b* estimates for patents compared with those in the full sample of 375 corporations. There was also relatively little consistency of *b* values between R&D subsamples. If there is any consistency, it is primarily in the *b*'s of patents for both drugs and electrical machinery where they are all negative as in the full sample of 375. This overall lack of consistency may be due to such things as:

- (1) Small sample size within industries;
- (2) Substantial differences between the reported R&D data of the two subsamples;
- (3) Response of multiple regression to skewed distributions;
- (4) Response of multiple regression to the admittedly invalid assumption of equal significance of units of R&D.

If the small sample size within industries is the primary factor, pooling all corporations within each subsample should help, hoping

TABLE 5

PATENT AND R&D PARTIAL REGRESSION COEFFICIENTS FOR SEVERAL SALES GROWTH MODELS

Industry	Published R&D Subsample			Unpublished R&D Subsample		
	Patents		R&D	Patents		R&D
	Model 1	Model 2	Model 1	Model 3	Model 4	Model 5
Paper	-1.5	13.6*	4.9*	4.5*	5.1*	4.8*
Chemical	0.6*	0.5	1.4*	1.3*	1.5*	1.2*
Random subsample A						
Drugs	-2.0*	-2.5*	-0.4*	-1.1*	1.0*	0.7*
Petroleum	-0.7	7.1*	1.4*	1.4*	-0.7	-2.3
Concrete	4.0*	3.9*	-0.2	3.1*	1.5	2.5
Nonferrous metal	3.3*	6.9*	0.7	1.2*	-1.2	-0.9
Fabricated metal	0.3	0.2	3.9*	3.9*	0.4	0.5
Farm machinery	-1.5*	-1.5*	-0.7	-0.7	1.3	0.3
Electrical machinery	-0.2	-1.0*	0.8	1.0*	-1.7*	-2.0*
Radio, TV	8.4	24.3*	9.2*	10.0*	-0.1	-0.3
Instruments	0.4	0.4	1.6*	1.6*		
Model 1	S55, P, RD					
Model 2	S55, P					
Model 3	S55, RD					
Model 4	S55, K, L, P, RDC					
Model 5	S55, P, RDC					

* Significant at .30 level

the variables S_{55} , K , and L will differentiate industries with different patent and R&D propensities. This was done for both subsamples using the model $S65A-S55$ on $S55$, K , L , P , RD (or RDC). The resulting b values in the published R&D subsample were -0.2 (not significant) for patents and 1.0 (significant) for R&D. In the unpublished sample b values were 0.6 (significant) for patents and 0.2 (not significant) for R&D. These diametrically opposed results seem to point to substantial differences in the two R&D subsamples. The unpublished R&D data as gathered by the Census Bureau were believed to be the more representative for the following reasons:

- (1) The Census data were closer in time to the base year 1955;
- (2) The Census data provided a larger sample;
- (3) The Census data are the response by industry to a uniform request required by law.

As a check on the stability of the regression coefficients with small samples, two subsamples of 11 companies each were selected randomly within the RDC chemical subsample. The coefficients are shown in Table 5. All four patent coefficients were both positive and significant.

As another check on consistency, the entire 375 corporations were pooled and the model $S65A-S55$ on $S55$, K , L , P was run. The resulting b value for patents was 0.7 (significant). This is quite consistent with the value of 0.6 from the pooled unpublished R&D subsample and may indicate that the unpublished data is the more reliable. If this were true, it would suggest that there is a positive contribution of patents to growth separate from the effect of R&D expenditures.

On the other hand, if the data of the two samples are equally reliable, it may be that the S_{55} , K , and L variables are not sufficient discriminators in the regression analyses of small samples in skewed distributions, and that nonequivalence of patents between industries discussed earlier is causing the difference in the results without real differences in the data.

Costs of the Domestic Patent System

The costs of the DPS are defined as the costs of doing those things related to domestic patent activities which would not be done if there were no patent system. Many of these costs are identifiable, and some can be quantified fairly accurately.

For the purpose of this study, it will be assumed that the R&D expenditures by the federal government are not a cost of the patent

system except for an extremely small percentage of those expenditures which are directly related to the time spent by R&D personnel in the mechanics of patent applications and related work. In the case of industry R&D, it will be assumed that a small percentage of expenditures are a cost of the patent system for the same reason. Whether or not the bulk of industry R&D expenditures is a cost of the patent system appears to be an open question.

Opinion on the extent to which the patent system stimulates R&D is rather diverse. Melman²¹ states unequivocally "Industrial firms will continue to enlarge their research in the useful arts as dictated by competitive needs, with or without patent privileges." Gilfillan,²² although agreeing that patents are losing ground to other factors in the stimulation of R&D, estimated that 15 to 20 percent of all American inventing (essentially 50 percent of industrial R&D expenditures) is motivated by the patent system. Gorn²³ agrees with Gilfillan estimating that of \$4 billion spent for R&D by industry in FY 1960, at least \$2 billion was due to the patent stimulus.

The authors were at first inclined to agree with Melman's conclusion but not necessarily with his logic. With the completion of the benefit analysis described in the preceding section, it no longer appears rational to say that the patent system does not stimulate some portion of industry R&D. The assumption, implicit in the benefit analysis, that industry would not take the risk of innovation without a patent monopoly, backed up with substantial data to suggest that patents promote more corporate sales growth, inevitably leads to the conclusion that industry also would not invest as heavily in R&D without the expectation of a patent monopoly. But with the assumption that R&D is partially stimulated by patents, there is no rational way to arrive at a percentage. So within the scope of this study, the question must go unanswered.

The estimated costs of the DPS are listed in Table 6 followed by a brief description of each cost estimate. It should be stated at this point that, with a benefit-cost ratio as the ultimate objective, and in view of

- (1) The potential R&D error discussed above in determining DPS costs;

²¹ Seymore Melman, "The Impact of the Patent System on Research." Study No. 11 of the Subcommittee on Patents, Trademarks and Copyrights (Washington, D.C.: G.P.O. 1958), p. 62.

²² S. C. Gilfillan, "Invention and the Patent System," presented before the Joint Economic Committee, 88th Cong., 2nd. Sess., Washington, 1964.

²³ See note 7.

- (2) The error involved in estimating DPS private sector costs as discussed later; and
- (3) The tremendously greater error in estimating monetary benefits as discussed in the next section,

it becomes trivial to be concerned with any relatively small patent system cost. Consequently any patent system cost which appeared to be less than about \$1 million was omitted. In general, costs have been related to the year 1965, but there was some variation in this, and no attempt was made to adjust these since they were not significant in relation to the whole.

Patent Office costs in the amount of \$24 million represents 75 percent of the FY 1966 budget of \$32 million (excluding trademark costs). The rationale for using 75 percent of total patent activity costs for the DPS is based on the ratio of domestic to total patent applications in 1965. In 1965 the Patent Office received 93,391 patent applications (excluding reissues and design patents) of which 71,065 or approximately 75 percent were domestic patents. Although there is not an equivalence of cost for handling foreign and domestic applications, this assumption was satisfactory for this study.

TABLE 6

ESTIMATED ANNUAL COSTS OF THE DOMESTIC PATENT SYSTEM

Description	(\$ Millions)
Federal Government	
Patent Office	24
Other Agency Patent Activities	6
U. S. Courts	2
Research and Development	15
sub-total	47
Private Sector	
Applications and Litigation	162
Research and Development	74
Educational	2
sub-total	238
Total	285

Other federal government agency patent activity costs in the amount of \$6 million were based on information from the Civil Service Commission. The CSC records showed 347 professional patent employees in other agencies of the executive branch of the federal government. The median grade of this group was GS-13 and, using an annual salary of \$15,000 (middle of the GS-13 grade), the annual cost was approximately \$5 million. Using a ratio of one nonprofessional employee for every three professional employees amounted to 116 nonprofessional employees. At an average salary of \$6,000 (middle of the GS-5 grade) this amounted to almost \$1 million.

The portion of U.S. Court operating costs related to patents amounting to \$2 million was based on information from the Administrative Office of the U.S. Courts and the Court of Customs and Patent Appeals (CCPA). The U.S. Court budget in FY 1966 was \$64 million. Of a total caseload of 100,635 (70,906 civil and 27,929 criminal) begun in 1966, 1,730 or 1.7 percent were copyright, patent and trademark (mostly patent) cases. This amounts to \$1.1 million (1.7 percent of \$64 million) which is too high from the viewpoint that it includes copyright and trademark cases but too low since patent cases apparently take more time than other civil cases. The CCPA FY 1966 budget was \$.5 million. Of the approximately 400 cases on the calender in FY 1966 about 350 or seven-eighths were patent cases. This amounts to \$.4 million and together the court costs approximate \$2 million.

Estimating the private sector legal costs (applications, appeals, interferences, and infringements) of the patent system involved the use of much less complete information. The amount of \$162 million was based on a 1964 survey²⁴ of the American Patent Law Association (APLA). At the time of the report there were about 7,400 lawyers and agents (predominantly lawyers) registered with the Patent Office. The survey showed that, of the 840 useful responses, there was essentially an equal division between patent lawyers in private practice and those employed by corporate patent departments.

Using the same percentage split for the 7,400 patent lawyers and agents and the survey's median incomes of \$18,000 for corporate patent lawyers and \$24,000 for private practice patent lawyers, the costs amounted to \$155 million. Average overhead costs of 39 percent amounted to an additional \$61 million for a total of \$216 million. Of this amount, 75 percent (\$162 million) was used, again based on the ratio of domestic to total patents. These costs may be too high in that

²⁴ 1964 *Economics Survey Report*, American Patent Law Association (Philadelphia: Daniel J. Canton Co.)

(1) the survey results were biased toward those with higher income; (2) some of the 7,400 persons were agents rather than lawyers at a lower average salary; and (3) all 7,400 persons registered were undoubtedly not exclusively in patent work. On the other hand, the costs may be too low since (1) lawyers other than those registered with the Patent Office do handle patent work, especially in infringement litigation; and (2) probably more than 75 percent of patent lawyers' time is spent on domestic patents.

R&D costs attributed to the patent system in the amount of \$89 million (\$15 million federal and \$74 million industry) were an estimate of the costs associated with time spent by inventors in providing required information for patent applications and interferences, i.e. the mechanics of acquiring patents. The estimate was based on a very crude guess that inventors in corporate R&D spend 1 percent of their time on these matters. Using the corporate R&D expenditures for FY 1966 from *Industrial Research* magazine²⁵ in the amount of \$7.4 billion, this amounted to \$74 million. This figure may be too high in that the \$7.4 billion includes many other costs besides inventors' salaries and in that the 1 percent factor may itself be too high. The comparable *Industrial Research* figure for FY 1966 R&D expenditures by the federal government was \$15.1 billion. Knowing that there are far fewer patents resulting from government R&D (according to Holman²⁶ the ratio is about 40 to 1), the 1 percent figure was arbitrarily cut back to one-tenth of 1 percent. The resulting figure, which may be too high, was \$15 million.

There are a great many other activities associated with the patent system which on an individual cost basis are undoubtedly quite small. Such things include The Patent, Trademark, and Copyright Research Institute of The George Washington University, patent law courses taught at law schools, time spent by economists and others studying and writing about the value of the patent system, and the cost of printing what these economists write. These educational costs were crudely estimated at \$2 million which conveniently rounded out the total cost estimate at \$285 million.

This estimated cost of the patent system is in the same ball park as Gilfillan's estimate of \$140 million since he did not include R&D costs similar to the \$89 million described above. It is also in reasonable

²⁵ Victor J. Danilov, "\$24 Billion for Research," *Industrial Research* (January 1967), pp. 52-55.

²⁶ Mary A. Holman, "The Utilization of Government-Owned Patented Inventions," *PTC J. Res. & Ed. (IDEA)*, Vol. 7, No. 2 (Summer 1963), pp. 109-161.

agreement with Gorn's estimate of \$150 million for what he called procedural costs.

The Benefit-Cost Ratio of the Domestic Patent System

The statistical evidence presented in the analysis of benefits section—strong patent position leads to greater corporate sales growth—appears to be on reasonably solid ground. Transforming this statistical differential to benefits measured in dollars is quite another matter. It was partly in recognition of this problem that a decision was made early in this study to attempt to get several patent benefit estimates through different approaches. If the resulting benefit estimates were in the same ball park, then there would be more credence for the estimates.

The monetary benefits and the benefit-cost ratios must be viewed only as crude preliminary estimates. They are obviously contingent on the soundness of the assumptions and the reliability of the data.

The costs of the domestic patent system, estimated at \$285 million in the preceding section, have been arbitrarily rounded to \$300 million. This has been done because the variations in the different monetary benefit estimates are so great as to require minimum rounding to tenths of billions of dollars.

In order to arrive at estimates of the domestic patent system benefit-cost ratio, it was first necessary to transform the benefit statistics into monetary estimates. This was done in four different ways, two based on the contingency table approach and two on multiple regression, domestic and international. The first method compared the actual sales growth of HPP corporations in an industry with that which they would have experienced had they grown at the rate of the LPP corporations in the same industry (see Table 2). This estimated monetary difference in sales growth represents a differential growth over a 10-year period. Since the objective was a measure of the annual monetary benefit, the 10-year differential growth value was divided by 2 to derive a mid-period or mean annual value. This is because the "10-year growth" dependent variable used throughout this study is really the "tenth-year sales differential."

The ninth-year sales differential, assuming a linear increase over 10 years, would be ————— less.

S65A-S55

10

The sales differential in the fifth year—used to estimate the average annual growth—would be obtained by dividing the 10-year sales differential by 2. The resulting value was again divided by 2 to account for

one-half of the patent relationship attributed to R&D as was determined earlier. The resulting industry values, listed in Table 7 under Method 1, totaled \$3.7 billion.

The second way was to multiply the change in percentage share of the market of the HPP corporations in an industry by the adjusted 1965 sales of the industry sample in question. The resulting value was divided by 2 as before to get an annual mid-period value and then divided by 2 again to account for the contribution of R&D. The resulting industry values are listed under Method 2. The sample total was \$0.8 billion.

The third method used the results of multiple regression. Since the value of *b* for sales growth on patents was consistent in the full sample of 375 corporations (0.7) and the unpublished R&D subsample (0.6), the latter value was used. Since the S65A-S55 dependent variable was entered into the computer in units of \$100,000, the *b* value of 0.6 meant that the average patent in the sample was associated with \$60,000 in sales growth. With approximately 100,000 patents in the

TABLE 7

ESTIMATED DOMESTIC PATENT SYSTEM MONETARY BENEFITS

MILLIONS OF DOLLARS

Industry	Method 1	Method 2
Tobacco	+78	+24
Lumber	+25	+20
Paper	+80	+42
Chemicals	+398	+190
Drugs	-145	-66
Soaps, cosmetics	+58	+44
Petroleum	+2,343	+291
Concrete, gypsum	+100	+39
Nonferrous metals	+130	+73
Fabricated metals	+115	+60
Farm machinery	-105	-43
Electrical machinery	-28	-24
Radio, TV	+358	+71
Instruments	+213	+70
Miscellaneous	+40	+28
Totals	+3,660	+819

full sample, the patent effect was estimated at \$6 billion. Dividing by 2 as before to get a mid-period or mean annual value, and by 2 again to allow for the confounding of numbers of patents with R&D output, the result was \$1.5 billion.

The foregoing three estimates of the average annual monetary benefits of patents, \$3.7, \$0.8 and \$1.5 billion, were based on the domestic study and were estimates only for the sample. Since the cost estimate was made of the entire domestic patent system, benefit estimates are needed for the entire population rather than just the sample. The simplest way of doing this was to compare the number of patents in the sample of 375 corporations with the total number of domestic patents in force on December 31, 1955. There were 103,679 patents in the sample and 522,785 patents in the entire population. This is a ratio of approximately 5 to 1. Since many patents are neither assigned nor worked, and to correct for a possible bias in the original selection of industries, the ratio was arbitrarily reduced to 3 to 1 to provide a conservative estimate. Multiplying the three benefit estimates by this ratio gave the benefit values of \$11.1, \$2.4 and \$4.5 billion. The fourth estimate, described in the following international study, was \$13 billion. Using the cost estimate of \$0.3 billion, benefit-cost ratios of approximately 37 to 1, 8 to 1, 15 to 1, and 43 to 1 were obtained.

The above monetary benefits and benefit-cost ratios do not reflect the total situation, since they were concerned only with the *growth* in corporate sales and did not take account of the contribution of the patent system to the sales base. Although no attempt was made to estimate the magnitude of this, it appears that it may be about equal to the estimated growth benefit. In the case of the monetary benefit estimates of \$11.1 and \$2.4 billion determined by the contingency table approach, there is an additional factor, the patent base, required in order to complete the picture, for the benefits have been estimated only on the basis of a differential—not a zero—patent position, and certainly some benefit comes from the patent base. No attempt was made to estimate a corrective factor.

Although these monetary benefit estimates may appear large, they are actually small compared to the estimates of Sanders and Gorn—\$30 billion and \$10 billion respectively—because their estimates relate to profits. On a sales basis their estimates would have to be increased about tenfold—\$300 and \$100 billion respectively. These large differences highlight the importance of the zero base concept.

THE INTERNATIONAL PATENT SYSTEM

An Approach to Determining Benefits

Theoretically there is an absolute "zero base" in the international system, but the economics of the isolated countries having no patent systems (e.g. Thailand, drugs in Italy, and the Netherlands in the period 1869-1910) have been too confounded with those of neighboring countries and too different in economic policies, cultures, climates and philosophies to have an effective zero-base measure even on the international scale.

The literature, although almost completely subjective, leaves little doubt that some guarantee of protection for intellectual and industrial property is necessary for international transfer of technology and investment. The realization of this need led to the 1883 Paris Union convention of mutually interested nations and the continued active participation and growth of the Bureaux Internationaux Réunis pour la Protection de la Propriété Intellectuelle (BIRPI) to the present day.

Accelerating worldwide advances in science and technology and multiple foreign patent filings, superimposed upon the heterogeneous domestic patent systems, having caused increasing domestic and foreign patent application backlogs. Consequently, there is urgent need for change in the international patent system.²⁷ The present one is correctly more a situation than a system and consists of the sum of the individual national patent systems and the interfaces between them.

Behrman²⁸ has contributed a number of papers on licensing abroad of American-held patents and licensing in the U. S. of foreign-held patents. The U.S. Patent Office²⁹ prepared an analysis of 137 returned questionnaires to U. S. industries on costs of foreign licensing. Wagret³⁰ has looked at various aspects of the economics of patents,

²⁷ BIRPI released on 5/31/67 in Geneva a draft of a proposed Patent Cooperation Treaty designed to increase greatly international cooperation in the protection of inventions.

²⁸ J. N. Behrman, "Licensing Abroad Under Patents, Trademarks, and Know-how by U.S. Companies," *PTC J. Res. & Ed. (IDEA)*, Vol. 2, No. 2 (June 1958), pp. 181-277.

²⁹ U.S. Dept. of Commerce Patent Office, Office of International Patent and Trademark Affairs (OIPTA), 1965 International Patent Survey Tabulated Summary, Mimeo. (May 1966.)

³⁰ Jean Michel Wagret, "Certain Aspects of the Economics of Patents for Inventions," *Industrial Property*, No. 8 (Geneva: BIRPI, August 1966), pp. 190-197.

and the net technological balance of payments for the United States is regularly prepared by the Department of Commerce, Office of Business Economics, but no objective work on the total benefits or costs of the international patent system has come to our attention.

Penrose³¹ adopted a rather pessimistic view as follows:

The patent system distributes rewards according to the commercial value of the patent monopoly and the skill of the patent lawyers. Some countries will obtain more of these rewards in return for the services of their inventors and lawyers than they pay out for similar services in other countries. Only to these countries does a net monopoly gain accrue, but since this gain is at the expense of other countries, it is no gain for the world as a whole. Invention is the product for which the price is paid and it is difficult to feel even a reasonable degree of confidence in an assertion that the increase in the rate of invention which can be attributed to foreign patents is sufficient to offset the costs of an international patent system.

Most students of the patent system probably would agree that the number of foreign patent filings is more an indication of marketing scope than technological development. The levels of foreign patenting and licensing, as measured by royalties or the technological balance of payments, are valuable indicators of technology flow and also may be related to exports, but royalties cannot be used as a measure of total benefit. Even if royalty data were available for all nations they would provide only information on income to the licensing nation and perhaps a minimum estimate of the patent value to the licensee but would not measure the overall benefit to the world. Similarly, exports are a measure of interface flow but are a relatively small part of the world Gross National Product. For example, 1965 U. S. exports totaled \$27 billion, less than 4 percent of the U.S. GNP of \$681 billion.

The level or number of domestic patent filings in each country, however, is believed to be an indicator of technological development and trends. The rationale for evaluating the international patent system was similar to that used for the domestic system: Whatever increase in world GNP which was associated with domestic patenting was assumed to be the best quantitative measure of the benefit of the patent system to the international society and economy. The ideal zero base would be two groups of economically and technologically equivalent nations, one group having patent systems and the other without patent systems. This situation does not exist and in the ever shrinking world is not capable of existing as two mutually exclusive systems. Therefore the benefit of the system has been estimated using con-

³¹ *Supra* note 2.

tingency table and regression methods to study the relation of various domestic patenting levels with subsequent growth in the respective national GNP. The summation of the individual national GNP's includes value added from exports and estimates the world GNP.

Secondary to the overall world benefit, there is also considerable interest in the direct return to the United States from the international patent system, or more broadly, the direct return to any one nation without considering the others. Although discounted for determining worldwide patent benefits, technological balance of payment data provide minimum estimates of the net value of foreign filing to a country. Another method, and one to test the concept that foreign patent filing is more an indication of marketing scope than technological development, is to assess as a patent benefit to the exporting country that portion of its export sales associated with its foreign patent filings in the respective importing countries. A patents and exports study is a supplementary part of this evaluation.

Benefit Analysis Data

The necessary zero base for any definitive evaluation of the patent system is just as impossible to attain on the international scale as on the domestic. The one country, Thailand, which has clearly had no patent system throughout its history, was observed by Robbins³² to have rejected a patent law in February 1965 because the Thai people, who do little inventing, would have to pay licensing fees for use of foreign inventions. Nevertheless, Thailand was included in the study as a "zero patent" country.

Use of the number of domestic patents in countries with patent systems as a measure of the level of patenting was a necessary, if seemingly naive, simplification. Wagret³³ recognized the lack of homogeneity of patents as a measure of inventive activity, e.g. differences in qualitative aspects between patents within the same country, differences in national legislations which refuse patents in certain sectors, variations in unity of inventions so that a given invention having plurality of form can be the subject of a single patent in France but two or more in Germany or the United States, and evolutionary

³² Leonard J. Robbins, "Industrial Property Relations with the Less Industrialized Nations: An Attorney's View," *IDEA*, Vol. 9, Conference Number (1965), pp. 194-199.

³³ *Supra* note 30.

changes in patent policy—within and between countries—superimposed over all.

The numbers of patents used in the study were the 17-year domestic patent totals, 1939-1955, summed from Federico.³⁴ Although foreign patents have varying monopoly lengths, and in all countries except the United States and Canada are voided if annual fees are not paid, the 17-year period was used as a common base. It was also realized that this period included the years of the Second World War, but this is the latest period available if the concept of using the subsequent 10-year economic growth, 1955-1965 is used to evaluate the benefits of international patenting.

The patent statistics are the limiting variable of the study and determined the countries which were included. These countries are listed in Table 8. One of the most obvious omissions is the United

TABLE 8

PATENTS AND ECONOMIC GROWTH

Country	Growth in GNP, (\$Billions) 1955-1965 (1)	National GNP in 1955 (\$Billions) (2)	Number of Domestic Patents 1939-1955 (3)	Percent Do- mestic Patents of Total (4)	GNP per Pop. 1955 (\$) (5)	Pseudo 1955 Total R&D Exp., (\$ Billions) (6)
Austria	5.1	4.1	17,489E	45	596	0.012
Canada	26.8	29.3	9,850	07	1,714	0.312
Denmark	5.8	4.2	8,392	34	941	0.042
France	58.9	34.5	139,875	48	771	0.550
Germany	67.5	44.6	215,611E	79	821	0.625
India	16.7	13.3	4,432E	20	34	0.080
Italy	34.6	22.1	87,449E	56	458	0.132
Japan	61.1	22.7	77,146E	86	247	0.340
Netherlands	10.6	8.4	10,556	30	778	0.159
Norway	3.6	3.4	8,457	32	980	0.027
Sweden	10.5	8.8	24,171E	41	1,209	0.131
Switzerland	7.5	6.2	53,846	49	1,253	0.100
Thailand	2.3	1.7	0	—	70	—
United States	283.7	397.5	522,785	89	2,273	13.500

³⁴ P. J. Federico, "Historical Patent Statistics, 1791-1961," 46 *JPOS* 89-171 (February 1964).

Kingdom for which only the number of domestic and foreign patent applications were available in Federico's study. It was believed that patents granted, and not applications, were the proper base from which to measure the patent economic potential. For the countries marked with an "E," there was at least one year with the number of domestic patents missing. Data for the missing year(s) were estimated so as not to create any biases from differing lengths of record.

Unfortunately, in the export study, it was not possible to use the 1939-1955 patent period since the patent data were not available on a country-by-country basis until 1951. Accordingly eight-year exporting country patent totals, 1951-1958, in the importing country were compared with the respective subsequent increase in exports from 1958 to 1965.

A more comparable patent variable for the patent and economic growth study was believed to be the percentage of the total number of a country's patents held by its nationals—percentage domestic patenting—but this variable was also more difficult to equate into a quantifiable benefit figure. Similarly, in the patent and export study, the percentage of the importing country's foreign patents held by the exporting country was allegedly a more comparable statistic than the number of patents. Both patent variables have been used.

The national economic growth was estimated as the difference between the 1965 GNP at market prices and the 1955 GNP. These figures, and also the 1955 population figures used in determining the standard of living index, GNP/population, were obtained from the International Monetary Fund publications.³⁵

Export data were obtained from two sources. Annual data for 1956-1958 were taken from United Nations publications.³⁶ Due to a change to a nonsummary format for later years, the 1963-1965 data were tabulated from the Organization for Economic Cooperation and Development (OECD) publications.³⁷ Export data were summed only for Standard International Trade Classification (SITC) single commodity numerical groups 5 (chemicals), 7 (machinery and transport equipment), and 6 and 8 (other manufactured goods). If any exports are related to patenting these SITC manufacturing exports were believed most promising to show this relation.

³⁵ *International Financial Statistics*, (International Monetary Fund: December 1966 for 1965 data and December 1963 for 1955 data).

³⁶ Statistical Papers, Series D, Commodity Trade Statistics, (United Nations: January-December Exports, 1956, 1957, 1958).

³⁷ Trade by Commodities. Series C, Exports, Jan.-Dec. 1963, 1964, 1965. (Paris: Organization for Economic Cooperation and Development.)

Since foreign patenting in some cases may lead to foreign investment rather than exports, this variable was also examined for the United States. The annual foreign investment data for 1956-1958 were obtained from Pizer.³⁸

The representativeness of national gross expenditures on research and development are probably more questionable than those for corporations in the domestic study. Besides normal reporting difficulties it is difficult to compare absolute levels of research outlays between countries because of the inappropriateness of using normal exchange rates for converting national expenditures to an equivalent R&D basis. For example, Freeman and Young³⁹ calculated experimental research exchange rates indicating that for the same R&D costs 1.5 times as much labor, capital, and material could be obtained in France than in the U.S., 1.9 times as much in the Netherlands and 3.0 times as much in the USSR. Similarly, there are great difficulties in defining scientists and engineers rigorously enough to allow valid international comparisons. Freeman and Young provide an excellent discussion of the international research and development effort and estimated gross expenditures on R&D for 1962 only for Belgium, France, Germany, Netherlands, United Kingdom, and the United States.

Although there have been tremendous increases in R&D the last decade, the effect of R&D is so confounded with patent system effects that "pseudo 1955 R&D" data have been estimated from publications of the OECD.⁴⁰ The percentage R&D of the GNP in 1963 or 1964, available for 12 countries in the study and estimated for Denmark, were multiplied by the respective country's 1955 GNP. There is no doubt that the 1955 estimated R&D figures are too high, e.g. the pseudo U.S. 1955 R&D figure of \$13.5 billion is about double the actual 1955 total R&D expenditure, but the estimated 1955 values were used to put all countries on the same base. No corrections were made for research exchange rates, although one study was performed on just 12 countries, omitting the United States, for a more comparable R&D base.

³⁸ Samuel Pizer, Foreign Investments. "Survey of Current Business," Office of Business Economics, U.S. Dept. of Commerce (September).

³⁹ C. Freeman and A. Young, "The Research and Development Effort in Western Europe, North America and the Soviet Union" (Paris: OECD 1965).

⁴⁰ OECD Statistical Tables and Notes, DAS/SPR/66.14, Directorate for Scientific Affairs, International Statistical Year on Research and Development (Paris 1/23/67). (Data for India and Switzerland from OECD mimeo. pages. Denmark not available and estimated).

The Analysis of Benefits: Patents and GNP

An ambitious economic survey of Europe to partition the components of economic growth was begun in 1961 by the United Nations. By the time of its completion in 1964, the study had evolved to just "Some factors in economic growth . . ." ⁴¹ Frederick Strauss, U. S. Department of Commerce, Bureau of International Commerce, who was responsible for the organization of the UN study, indicated to the authors that any relation of patents with economic growth or exports would be submerged, or at least confounded, with changes in economic policy, especially during the post-war reconstruction period of this study. Nevertheless, in the UN study the rise in national income (or product) or income per capita was indicated to be the best available measure of economic growth.

Countries for which domestic patent data were available for the period 1939-1955 were separated into two groups of high national patent propensity and low national patent propensity. This was done by dividing the 17-year patent totals by the respective 1955 GNP. These groupings, together with national patent propensities, and 1955 and 1965 GNPs are shown in Table 9. The high seven countries as a group grew 173 percent and the low seven grew 77 percent. The entire group of countries grew 99 percent. The contingency table below shows the distribution of countries by patent propensity and GNP growth.

GNP GROWTH—FOURTEEN COUNTRIES

	Above	Below
HPP	7	0
LPP	5	2

The impact of the USA size is substantial. The 1955 GNP of the USA is nearly 10 times the size of the next largest country's GNP. Theoretically the size effect should be taken care of by the measure of patent propensity. Generally this was true in the domestic study where all corporations were competing against one another in the same market with the same people. This is not as true in comparing countries where cultural, economic and other differences are great.

⁴¹Economic Survey of Europe in 1961, Part 2: Some Factors in Economic Growth in Europe During the 1950's (Geneva: United Nations, Secretariat of the Economic Commission for Europe, 1964).

TABLE 9

NATIONAL PATENT PROPENSITY AND GNP GROWTH

Country	HPP				LPP		
	Domestic Patents per \$ Million of GNP	1955 GNP (\$ Billions)	1965 GNP (\$ Billions)	Country	Domestic Patents per \$ Million of GNP	1955 GNP (\$ Billions)	1965 GNP (\$ Billions)
Switzerland	8.62	6.2	13.7	Sweden	2.75	8.8	19.3
Germany	4.84	44.6	112.1	Denmark	2.01	4.2	10.0
Austria	4.22	4.1	9.2	U. S. A.	1.32	397.5	681.2
France	4.05	34.5	93.5	Netherlands	1.26	8.4	19.0
Italy	3.96	22.1	56.7	Canada	.34	29.3	56.2
Japan	3.40	22.7	83.8	India	.33	13.3	30.0
Norway	2.95	3.4	7.0	Thailand	0	1.7	4.0
Total		137.6	376.0			463.2	819.7

Therefore the USA was eliminated reducing the sample to 13 countries. To be consistent with the methodology used in the domestic study, Norway, the median value country, was changed from the HPP group to the LPP group. Using this grouping, the high six countries grew 175 percent and the low seven countries grew 111 percent. The 13 countries as a group grew 155 percent. The contingency table below shows the distribution.

GNP GROWTH—THIRTEEN COUNTRIES

	<u>Above</u>	<u>Below</u>
HPP	3	3
LPP	0	7

Thus it appears that countries with high patent propensity have a greater GNP growth than those with low patent propensity assuming that other factors are randomly distributed.

The effect of the national R&D effort was examined in the same way. The grouping of the 14 countries by high and low R&D effort is shown in Table 10 together with 1955 and 1965 GNP data. The high seven grew 96 percent and the low seven grew 122 percent, a negative effect for R&D. The frequency distribution in relation to group growth is shown below.

GNP GROWTH—FOURTEEN COUNTRIES

	<u>Above</u>	<u>Below</u>
HRD	6	1
LRD	6	1

Again the impact of the USA size is substantial. Omitting the USA again resulted in a sample of 13 countries. The high six grew 173 percent and the low seven grew 122 percent, providing a positive effect for R&D similar to patents. The distribution is shown below.

GNP GROWTH—THIRTEEN COUNTRIES

	<u>Above</u>	<u>Below</u>
HRD	2	4
LRD	1	6

TABLE 10

R&D PROPENSITY AND NATIONAL GNP GROWTH

	HRD			LRD			
	Percent R&D of GNP	1955 GNP (\$ Billions)	1965 GNP (\$ Billions)	Country	Percent R&D of GNP	1955 GNP (\$ Billions)	1965 GNP (\$ Billions)
Country	3.4	397.5	681.2	Canada	1.1	29.3	56.2
	1.9	8.4	19.0	Denmark	1.0	4.2	10.0
	1.6	34.5	93.5	Norway	0.8	3.4	7.0
	1.6	6.2	13.7	India	0.6	13.3	30.0
	1.5	22.7	83.8	Italy	0.6	22.1	56.7
	1.5	8.8	19.3	Austria	0.3	4.1	9.2
	1.4	44.6	112.1	Thailand	1.1	1.7	4.0
		522.7	1,022.6			78.1	173.1
	Total						

Since eight of the 13 countries contributed to the positive R&D effect whereas 10 of the 13 contributed to the positive effect of patents, a slight edge is indicated for patent propensity. In a statistical sense, however, the effects of patents and R&D appear to be essentially equal.

A monetary benefit was estimated from Table 9, or more conservatively from the high six and low seven grouping without the United States. If the HPP group grew the same amount as the LPP group (111 percent), the HPP nations would have grown to a 1965 total GNP of \$283 billion. Actually, the growth was \$369 billion (376.0-7.0 for Norway which fell to the LPP group with the removal of the U. S.). This is a growth differential associated with patenting of \$86 billion at the end of the 10-year period, or \$43 billion at the mid-point or average annual value. If one-half of this is attributed to R&D, a conservative estimate of benefits in the 13 countries due to patents was \$21 billion.

While the contingency table approach has nonparametric advantages in studying relations between variables with skewed distributions, it also makes it necessary to assume that the factors not studied are randomly distributed. In order to look at other variables and to provide another estimate of the patent benefit, multiple regression techniques were used, fully realizing the inadequacy of the small sample for any definitive conclusions.

As in the domestic study, while simple correlation indicates the 1939-1955 patent base highly associated with growth in GNP from 1955-1965 ($r=.97$) the patent variable is, among other things, an indicator of scale and can be properly evaluated only by including other factors of economic growth in a multiple regression model. Unfortunately, however, even if other meaningful economic growth factors were available, patent statistics were still available for only 14 countries, including "zero-patent" Thailand. Nevertheless, it is mandatory that a scale variable be included, and the simplest model used was a linear model with the 1955 GNP as the principal scale variable and the number of domestic patents, P , as the patent variable. Other available and pertinent variables examined were a standard of living index [$G = \text{GNP}/\text{population (1955)}$] and the national research and development effort, [$RD = \% \text{ RD (1963-64)} \times \text{GNP (1955)}$].

All simple correlation coefficients were positive and significant beyond the .05 level. Faced with the dilemma of producing spurious results due to the small sample but encouraged by having a major part of the world's economic and technological growth represented in the sample, more complex models than the simple linear one with GNP

and P were examined, primarily with regard to examining the stability of the partial regression coefficients for patents.

Although not shown here, an interaction model—GNP, P, and their interaction, GNPxP—produced the highest R^2 (.989 with United States in sample and .892 without) with an indication of decreasing patent benefits for the larger countries. A logarithmic model of GNP, P and G provided an R^2 of .965 and thus provided no better fit than a linear model. Use of the percentage domestic patents variable in lieu of the number of patents in a linear GNP %, P, and G model resulted in an R^2 of .982 as compared to one of .984 for the number of patents. For convenience and ease of extrapolating a patent value for this study, numbers of patents and linear models were used. The regression coefficients for P and R&D with their standard errors (in parentheses) are shown in Table 11.

With the "outlier" United States in the sample the correlation was considerably higher than when it was removed. The *coefficients for the patent effect*, both in size and significance at the .30 level *were amazingly stable in the various models*, the greatest decrease in the coefficient occurring when either R&D was added to the model or the United States was dropped from the sample. The coefficients stabilized around .002 without R&D in the model and near .001 with R&D in the

TABLE 11

PARTIAL REGRESSION COEFFICIENTS AND THEIR STANDARD ERRORS FOR
GNP GROWTH ON PATENTS AND R&D FOR SEVERAL MODELS

Model	P	RD	R^2
		(With United States in Sample, n = 13)	
GNP, P	.0023*(.0006)		.982
GNP, P, G	.0022*(.0006)		.984
GNP, P, G, RD	.0013*(.0007)	— .213*(.125)	.989
GNP, P, RD	.0015*(.0008)	— .213*(.137)	.986
GNP, RD		— .384*(.123)	.979
		(Without United States in Sample, n = 12)	
GNP, P	.0012*(.0008)		.862
GNP, P, RD	.0009*(.0009)	.360(.474)	.872

* Significant at .30 level.

model. As postulated in the domestic contingency section of this study the addition of R&D tended to halve the effects of patents which seemed entirely reasonable. The coefficients for R&D, however, were much more unstable and tended to enforce the opinion developed in the domestic section of the study that the R&D data were highly suspect. With the United States in the sample the R&D effect was negative and significant, but positive and not significant when the USA was eliminated from the sample. Eliminating the United States not only removed scale inequity but also probably made the remaining R&D expenditures more comparable.

A patent coefficient of .001 was used to extrapolate the benefits of the international patent system to the 13 countries with patent systems in the study. Since the GNP unit entered into the computer was 100 million dollars, the .001 patent coefficient indicates an increase in national GNP from 1955 to 1965 of \$100,000 per patent. This provides a mid-period or annual average benefit estimate of \$50,000 per patent. Since there were a total of some 1,180,059 domestic patents in the 13 countries in the base period, the total estimated increase in GNP credited to the international patent system was \$59 billion per year. When the coefficient was applied to only the United States domestic patents, 522,785, the internationally derived estimate of the benefits of the U. S. domestic patent system was about \$26 billion per year of GNP.

Even though the R&D effort was included in the study, some R&D effect undoubtedly still was confounded in the patent coefficient, because patents may be a better measure of effective R&D than the amount of R&D dollars spent. For this reason, as in the domestic study, the patent effect was arbitrarily halved again for a more conservative estimate of the patent system benefits. This estimated an international patent system benefit of about \$30 billion for the 13 nations and \$13 billion for the United States, the latter figure roughly corresponding with the benefits estimated previously for the domestic system.

The Analysis of Benefits: in Patents and Exports

The domestic patent system appears to show a net benefit to the U. S. and the international system to the world. But how does the international system affect flow of trade and technology through the many country interfaces? Changes in political and economic policy probably introduce much more variance in measures of interface flow than in the national GNP study. The formation of the OECD in 1948

led to liberalization of various European economic policies until by 1955 there was much intertrade and enlarged markets. It is believed that the slightly later patent base, 1951-1958, necessary for the export study, is sufficiently "modern" to escape major economic policy changes within the study period.

The technological balance of payments is often considered a direct measure of the benefit of the international patent system to any one particular country. Wagret,⁴² Freeman and Young,⁴³ and Fabian⁴⁴ summarized available technological balance of payment data, primarily as a measure of the flow of technology, and cautioned that the data reflect not only the results of industrial R&D but also successful investment, innovation, and marketing of new products and processes. The U. S. Department of Commerce, Office of Business Economics, regularly keeps these balance of payment accounts for the United States which show a favorable balance of about \$1 billion a year. It should be recognized, however, that all technological payments, not just the balance, reflect benefits because the purchased technology helps create new plant and equipment, new jobs and better products.

Wagret studied the relation of the share of German patent applications abroad with the respective share of German foreign commercial sales, and the relation of patents applied for in France by Americans with U. S. commercial exports to France, both of which trend upward from 1953 to 1964. He also joined the American economists in discussing the problem of causality, i.e., "Does Germany sell more because she files more patent applications or does she file more patent applications because she sells more?" For France, he proposed an

approximate relation
$$X = \frac{A + 1.25B}{4}$$
 where X is the number of local patents of French origin, A is the value of French sales in the country concerned, expressed in millions of francs, and B is the amount of royalties originating from such country in tens of thousands of francs.

The relation of foreign patenting with subsequent 1958-1965 increase in exports to the respective country of foreign filing was computed for 11 countries for which patent data were available. The scale variable used was the 1956-1958 average annual total manufacturing exports, E, from the particular country of the study to the respective countries in which the exporting country held patents in the period 1951-1958. Two patent variables were examined, the number

⁴² *Supra* note 30.

⁴³ *Supra* note 39.

⁴⁴ Yvan Fabian, "Note on the Measurement of the Output of Research and Development Activities," DAS/PD/63.48 (Paris: OECD May 31, 1963).

of foreign patents, P , and the percentage of the total foreign patents held in the importing country by the exporting country. Since the socio-economic conditions of the various countries are so different, a standard of living index, $G = \text{GNP}/\text{population}$, was also used as an independent variable. For the United States only, the effect of U. S. investment in foreign manufacturing, I , was also examined. The data used for the United States are shown in Table 12 as an example of the type of information used in each of the 11 studies.

Although the samples were extremely small, ranging from 11 to 13 countries for each of the 11 countries studied, a few models were examined preliminarily for the United States before running the study for the other countries.

An interaction model of E , P , and the EP interaction provided the highest R^2 (.939) of any model tested and indicated decreasing

TABLE 12

UNITED STATES EXPORTS AND FOREIGN PATENTING

Country	Increase In Mfgr. Exports to Country 1958-1965 (\$ Millions)	Avg. Mfgr. Exports to Country 1956-1958 (\$ Millions)	U. S. Patents in Country 1951-1958	Percent U. S. Patents of Total Foreign 1951-1958	GNP per pop. 1955 (\$)	Avg. U. S. Invest- ment in Foreign Mfgr. 1956- 1958 (\$ Mil- lions)
Austria	12.0	19.0	2,094	9.60	596	—
Belgium & Lux.	178.0	173.0	11,276	18.50	982	89
Canada	778.0	2,773.0	67,908	71.30	1,714	3,468
Denmark	42.0	31.0	1,593	15.00	941	13
France	294.0	259.0	25,074	24.20	771	248
Germany	459.0	234.0	12,265	26.80	821	274
Italy	240.0	179.0	16,052	22.70	458	74
Japan	330.0	323.0	8,497	50.10	247	33
Netherlands	234.0	159.0	3,745	23.60	778	45
Norway	21.0	43.0	1,937	17.20	980	15
Sweden	106.0	120.0	6,005	26.20	1,209	51
Switzerland	100.0	131.0	5,860	16.00	1,253	27
Thailand	30.0	46.0	0	—	70	—

effects of an increasing number of foreign patents. A logarithmic model of E and P produced an R^2 of .795, and adding I provided no significant increase ($R^2=.796$). The estimated partial regression coefficients for P, their standard errors (in parentheses), and associated R^2 values for four linear models were as follows:

PARTIAL REGRESSION COEFFICIENTS AND R^2
FOR INCREASE IN U.S. EXPORTS ON FOREIGN PATENTS

Model	Without Austria and Thailand (n=11)		With Austria and Thailand (n=13)	
	P	R^2	P	R^2
E,P	.079* (.064)	.77	.100* (.058)	.78
E,P,I	.088* (.066)	.79		
E,P,I,G	.045 (.067)	.85		
E,P,G			.102* (.059)	.79

* Significant at .30 level.

The relative stability of the coefficients for patents in the various models and the fact that the coefficients for patents were significant at the .30 level in all but one model lent credence to the estimate even though the standard error was relatively large.

While the patent variable, percent of the exporting country's patents in the importing country relative to the total foreign patents in the importing country, was more highly correlated with growth in exports in the United States, the variable was not as good a predictor as the number of patents in seven of the 11 countries. In fact, for Germany and Italy an E and % P model resulted in R^2 values of only .65 and .64 compared to the E and P model R^2 values of .90 and .82 respectively. Because of the foolhardiness of developing more sophisticated models with such small samples and because the number of patents in a linear model is more convenient and simpler to project benefit estimates within the purpose of the study, the E, P, G model was used for the other 10 country patent and export studies. The multiple regression coefficients for E, P, and G are shown in Table 13 with the associated R^2 by country. All partial regression coefficients for E, the scale variable used to represent all nonpatent system factors

except G, were positive and significant at the .30 level except for the United States. The coefficients for G were negative for nine of the 11 countries, but were significant for only four. Whether or not G was included made little or no difference in the partial regression coefficients for patents except for Italy where the patent coefficient was increased to .3 and became significant. The coefficients for patents were significant and positive, i.e. the more patents the more exports, for five of the 11 countries; positive but not significant in four, and significant and negative in the other two, Canada and Austria.

Fully realizing the error involved, but to get some idea of the portion of the manufacturing export flow attributable to the patent system, an estimate was made of the benefit to the United States in the following manner. First the number of U. S. patents in the 11 countries of the study were summed from Table 12 (deleting Switzerland and Belgium) to obtain a total of 145,170 foreign patents in the 1951-1958 period. Since the patent coefficient was in units of \$100,000,

TABLE 13

PATENTS AND EXPORTS

Partial Regression Coefficients of Increase in Exports 1958-1965
on Indicated Variable

Country	Average 1956-1958 Exports E	1951-1958 Foreign Patents P	Variable GNP/Popu- lation 1955 G	R ²
Austria	1.7*	-.3*(.19)#	-.06	.86
Canada	.6*	-.3*(.20)	.03	.99
Denmark	1.5*	.2*(.16)	-.1	.87
France	2.5*	.01 (.08)	-1.1*	.95
Germany	1.2*	.2*(.04)	-.7*	.91
Italy	3.4*	.2 (.25)	-1.4*	.82
Japan	2.5*	3.3*(1.8)	-0.2*	.99
Netherlands	1.7*	.2 (.22)	-.8*	.75
Norway	1.0*	.4*(.21)	-.03	.94
Sweden	1.0*	.1 (.15)	.05	.78
U. S.	0.04	.1*(.06)	-.7	.79

* Significant beyond .3 level.

Standard error of patent coefficient in parentheses.

the .1 estimate is an average growth in manufacturing exports from 1958 to 1965 of \$10,000 per patent. Since an annual figure was desired, a mid-point or annual average value of \$5,000 was multiplied by 145,170 to get \$726 million, the estimate of that portion of the average annual increase in U. S. manufacturing exports which might be attributed to the international patent system. At the same time the other countries were exporting to the United States. The nation's patent coefficients in Table 13 were multiplied by the total number of the respective country's patents in the United States (data not shown) and algebraically summed for an estimate of \$129 million as the portion of exports to the U. S. attributable to patents. Thus the net balance to the United States among the 11 countries in the study was about \$597 million. (As discussed previously with regard to technological payments, however, all exports might be considered to reflect benefits to the importing countries in providing better products, creating new jobs, and generally stimulating commerce, in which case the \$129 million would be added to the \$726 million.) Since this represented a balance between the U. S. and only 10 other countries, and these countries represent some of the most technologically advanced nations of the world, it was reasonable to extrapolate this net patent manufacturing benefit export balance to about \$1 billion a year for the United States. This was close to the \$1 billion net technological balance of payment figures gathered by OBE, which, if it could be assumed that patents are the primary reason for this balance, suggested that the international patent system benefits to the United States for exports and licensing may be on the order of at least \$2 billion a year. This benefit estimate is contained within the earlier world benefit estimate of \$30 billion.

International Patent System Costs

As in the domestic system, the costs of the international patent system are overwhelmingly influenced by whatever share of the R&D cost is attributed to the patent system. This arbitrary decision makes all other government and private sector costs secondary and of relatively minor importance if more than a few percent of the total R&D budget were assessed as a cost of the patent system. R&D data⁴⁵ available for 1963 and 1964 sum to \$27 billion annually for the 13 countries. The basic assumption of this study is that R&D would go on whether or not there were a patent system. Therefore, R&D itself is not con-

⁴⁵ *Supra* note 40.

sidered a cost except for the actual time of the scientist-engineer-inventor needed in the preparation of the patent solicitation process. If 1 percent of the nongovernmental R&D (col. 9, Table 14) and 0.1 percent of government R&D (col. 8, Table 14) is used as that portion of R&D time directly associated with the paper work of the patent application, the *R&D time costs* of the patent system sum to \$120 million for the 13 countries shown in Table 14.

The cost to the public economy of the government patent offices were either available or could be estimated⁴⁶ fairly precisely. They are shown in col. 1 of Table 14. These costs, which include either the actual costs of the respective patent offices or the receipts, whichever greater, totaled \$76 million for the 13 countries. These 13 countries accounted for 60 percent of the 1965 world patent filings.⁴⁷

The costs estimated in the domestic sector (Table 6) for U. S. courts, other agency patent activities, and educational activities were \$10 million. If foreign costs were assumed to be in the same ratio to the government patent office costs in other countries as in the United States ($10.0/32.1=.31$) the miscellaneous government costs for the other 12 countries with \$44.2 million in patent office costs were estimated at \$14 million for a total of \$24 million for the 13. The total government costs would then be $76 + 24$ or \$100 million.

The private sector costs of patent application solicitation and any subsequent litigation are difficult to estimate. The total private sector cost previously estimated for the United States is \$216 million. In 1965 there were 72,317 domestic patent applications, 22,312 foreign applications in the United States, and at least 105,000 applications⁴⁸ filed by U. S. citizens in other countries for a total of at least 199,629, or about 200,000 patent applications. This was about 28 percent of the total world filings in 1965. The overall U. S. average private sector cost per patent application was \$1,080, which is within Gorn's⁴⁹ estimate of

⁴⁶ Costs (or receipts if greater) were taken from national annual patent office reports for 1965 when available. Estimates shown in Table 14 were either made by extrapolating the government patent office costs for previous years or by building from the patent application and maintenance costs published by Federico, in "Renewal Fees and Other Patent Fees in Foreign Countries," Study of the Subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, U.S. Senate, 85th Cong., 2nd Sess. pursuant to S. Res. 236, Study No. 17. (Washington, D. C.: G.P.O. 1958). The total government fees for a patent maintained full term was divided by the patent term to get the average annual cost per maintained patent. This was multiplied by the number of patents active in 1965.

⁴⁷ Patent Applications Filed and Granted During 1965; Patents in Force at the End of 1965, *Industrial Property* (Geneva: BIRPI, December 1966 Annex)

⁴⁸ *Ibid.*

⁴⁹ *Supra* note 7.

TABLE 14
ESTIMATED COSTS OF PATENT SYSTEM IN THIRTEEN COUNTRIES

Country (in Order of 1965 Patent Applications)	Government Costs, 1965		Private Sector Costs, 1965				Total	R&D Costs	
	U. S. Dollars (Million)		Domestic		Foreign			Million U. S. \$	
	Actual or Est. Cost(E) of Pat. Ofc. or Receipts, Whichever Greater	Govt. Pat. Work Courts, Research Organization and Misc.	1965 Pat. Appl.	Cost of Solicit., \$ per Patent Appl.	1965 Pat. Appl.	Cost of Solicit., \$ per Patent Appl.		Govt.	Non-Govt.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
USA	32.1	10.0	72,317	—	22,312	—	216.0	13,930	7,393
Japan	5.3		60,796	200	21,127	500	22.8	248	644
W. Germany	15.8		38,148	200	28,322	600	24.6	580	856
France	4.5E		17,509	100	30,284	300	10.8	822	477
Canada	2.9		1,854	200	28,239	200	6.0	232	193
Italy	2.8E	-13.8	16,400E	100	12,908E	400	6.8	96	195
Switzerland	2.1E		5,721	100	12,459	400	5.6	49	133
Netherlands	3.9		2,505	200	14,779	600	9.2	116	198
Sweden	2.9		4,814	200	12,265	400	5.9	121	133
Austria	1.9E		2,714	200	9,118	300	3.2	9	14
Denmark	0.6E		1,153	200	5,560	400	2.4	50	50
India	1.0E		948	100	5,054	200	1.1	157	17
Norway	0.5E		870	200	4,029	400	1.8	23	19
Total	76.3	23.8					316.2	16,433	10,322

\$1,000 to \$2,500 per corporate patent application and \$800 per independent application. If the average U. S. private sector cost per patent application were applied to the total world patent applications of at least 724,709 in 1965, a maximum estimate of the international private sector cost of the patent system would be about \$780 million. This is a maximum because foreign patent solicitation costs are less and litigation much less than that in the United States.

The private sector estimated costs of patent solicitation per foreign patent application shown in col. 6 of Table 14 by country were obtained from an OIPTA survey⁵⁰ to U. S. corporations on the "... 1964 out-of-pocket prosecution cost per application pending" rounded to the nearest \$100. Estimates for Italy and Belgium were corrected downward from the survey mean on the basis of discussions with several U. S. patent attorneys filing a considerable number of foreign patent applications. In these same discussions, ball park estimates were also obtained of the private sector costs for domestic patent solicitation. These averaged approximately \$100 for all registration countries and \$200 for all examination countries. Thus, the summation of the private sector costs in col. 7 of Table 14—\$316 million—includes the estimate of all solicitation and litigation costs for the U. S. but just the solicitation costs for the other 12 countries. Since discussions with several patent attorneys also indicated patent litigation to be almost negligible in foreign countries compared to that in the U. S., and the annual government fee portion of the costs for keeping a patent in force in those countries requiring this (all but U. S. and Canada) was included in the government patent office costs, the \$316 million represents a minimum estimate of the private sector costs.

Another cost estimate was made by equating the ratio of the private sector U. S. costs to the U. S. government Patent Office cost ($216/32.1=6.7$) to the total of the 12 foreign patent office costs, \$44.2 million. This provided a \$296 million 12-country estimate and, with the U. S., a total of \$512 million for the private sector costs. The private sector costs for the 13 countries probably lie somewhere between \$300 and \$500 million and for the purposes of this study are arbitrarily placed at \$400 million.

The costs of the patent systems in the 13 countries of Table 14 were thus estimated to be:

$$\begin{aligned}\text{Costs} &= \text{R\&D fraction} + \text{Govt. costs} + \text{Private Sector costs} \\ &= \$120 \text{ million} + \$100 \text{ million} + \$400 \text{ million} \\ &= \$620 \text{ million}\end{aligned}$$

⁵⁰ See footnote 29.

International Patent System—Benefit-Cost Statement

The benefits from the existing international patent system for the 13 countries were conservatively estimated by two methods at \$21 billion and \$30 billion per year. The estimated costs of the existing system for the same 13 countries was about \$.6 billion. The benefit-cost ratio for the 13 nations, representing about 60 percent of the world patent applications, ranged from 35 to 1 to 50 to 1.

CONCLUSIONS

Kermit Gordon,⁵¹ Vice President of the Brookings Institution, summed up cost-benefit analyses very nicely with

Some benefits of government programs can be quantified in dollar terms. . . . In my experience, even when the quantification rests on shaky assumptions and heroic simplifications, the results if used with good judgement can usually make a positive contribution to the illumination of the problem.

In the light of this statement, the following conclusions have been developed:

(1) A zero base or standard of comparison is absolutely necessary for carrying out any meaningful cost-benefit study.

(2) The confounding of patent system effects with those of research and development efforts probably makes the absolute determination of total costs and benefits of the patent system impossible.

(3) Regardless of this confounding, there is strong consistent evidence of a net benefit derived from the patent system.

The authors began their Patent Office assignment and review of literature with a slight bias toward the economic school which holds that the patent system may no longer be necessary. By the end of their assignment, the data which had been gathered and analyzed as objectively as possible, while subject to tremendous error, led them to this definite conclusion that the patent system is resulting in a net benefit to the United States and to the world.

(4) There is reasonable evidence indicating that the monetary benefits of the domestic patent system probably lie in the range of \$2 to \$15 billion annually with probable benefit-cost ratios of 5:1 to 50:1.

⁵¹ Kermit Gordon, *Reflection on Spending*, The Brookings Institution (1967).

(5) The drug industry appears to make the least effective use of the patent system of the 15 industries studied.

(6) There is reasonable evidence that the monetary benefits of the international patent system to the world probably lie in the range of \$20 to \$30 billion annually with probable benefit-cost ratios of 30:1 to 50:1.

STUDENT PAPERS

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Competitive Name-Dropping^{*}

NORMAN L. NORRIS

SUMMARY

AT A TIME WHEN substantially all federal legislation related to intellectual property rights is being actively re-examined, it seems appropriate to re-examine the relief available from a practice termed competitive name-dropping. As defined in this paper, competitive name-dropping is a form of advertising involving the mere mention of a competitor's name without any attempt to confuse the purchaser as to the source of origin of one's products or to disparage the product of the competitor. It is a form of advertising not unlike that used currently by automobile rental agencies.

Although the frequency of occurrence of such a form of advertising is not great, it is increasing. And when this increasing frequency

* This paper was submitted by the author as a third-year law student in fulfillment of the requirements for Legal Writing, a course conducted by Professor L. James Harris in The National Law Center of The George Washington University.

is considered in view of a growing trend abroad among Treaty countries of the Paris Convention which now provide relief or soon will, a re-examination of relief in this country, both as to need and availability, would appear to be in order.

It is the purpose of this paper to examine the availability of relief in this country, which relief could provide a federal standard, thereby inherently uniform, so as to satisfy our treaty obligations. This search for relief was extended to the Trademark Act of 1946 as well as the misappropriation theory of the *International News Service v. Associated Press*.

Although the conclusions reached as to the availability of relief and the need therefore are subject to differences in opinion, it is at least hoped that this paper will stimulate further examination as to the need, the present availability, and the possibility of relief in the future.

COMPETITIVE NAME-DROPPING DEFINED

A NEW BREED OF ADVERTISING is maturing in this country which is quite different from that used in the past but not heretofore unknown. In its most basic form, it involves nothing more than mentioning a competitor's name in advertising products or services with no attempt to confuse the public as to the source of origin of the products or services. In other words, there is no attempt to palm one's products or services off as that of a competitor. In addition, there is no attempt to falsely imply or state a quality of goods or services by utilizing the competitor's name as a bench mark of quality. Furthermore, there is no attempt to disparage the competitor's products or services either directly, by mentioning his name and falsely commenting on the products or services, or indirectly, by mentioning his name and degrading his products by drawing an implied or stated equivalence with one's own inferior products or services.

Although this new breed of advertising may have various of the aforementioned elements entangled in it, the examination set forth herein will be limited to a totally truthful piece of advertising—which in a very real sense may be thought of as competitive name-dropping—perhaps most often used by the lesser-known brand which may be seeking an honest recognition as comparable to a

well-known brand. Akin to competitive name-dropping, although distinguishable from it, is the case of a brand seeking to draw attention to its advertising campaign by capitalizing on clever, attention-getting references to its competitors.

THE NEED FOR RE-EXAMINATION

No matter what the form of advertising or its purpose, it is reasonably well settled at this point in time that there is no remedy for the competitor whose brand was mentioned. Although an enthusiastic state court once granted relief for competitive name-dropping,¹ and a California statute would support it,² this is the exception to a well-accepted general rule. In other words, there is no relief at the federal level and very little chance for relief at the state level as the situation stands today. Yet, there are at least two reasons why this lack of relief should be re-examined with particular emphasis being placed upon relief at the federal level.

A first reason for re-examination is the increased incidence of the previously mentioned related form of advertising. For the first time, nationwide advertising campaigns are taking place wherein a competitor's name is mentioned or shown with no attempt to disparage, confuse, or even dilute the competitor's trademark or name. Admittedly, the advertising in these campaigns has been limited to what is commonly termed "puffing," or to a commercial joshing among equals, but the success of these campaigns might very well lead to competitive name-dropping.

The fact that competitive name-dropping might be the advertisement of tomorrow in the United States and the fact that the trend among the majority of commercially significant nations of the world is to grant relief for competitive name-dropping lead to the second reason for re-examination.³

The need for commercial cooperation among nations must be examined and the fact that international trade is growing at a rapid rate suggests that uniform trade ethics if not trade law may soon be the order of the day. In a sense, it is here now, although the United States may have failed to recognize its obligations in particular areas,⁴ i.e., competitive name-dropping. I am referring now to the

¹ *Winthrop Chemical Co. v. Blackmar*, 285 N.Y. Supp. 443 (Sup. Ct. 1936).

² Cal. Civil Code § 3369.

³ Offener, *International Trademark Protection*, (1965), pp. 82-98.

⁴ An address by Tom Arnold on Federal Unfair Competition Law, August 8,

obligations assumed under the treaty of the Paris Convention, Act of Lisbon 1958, Article 10bis (2) which provides:

Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition.

Similarly, the treaty of the Pan American Convention, 1929, Article 20 requires:

Every act or deed contrary to commercial good faith or to the normal and honorable development of industrial or business activities, shall be considered as unfair competition and therefore unjust and prohibited.

A step toward fulfilling the U. S. obligations under the patent sections of these treaties has already been taken as emphasized in the Report of the President's Commission on the Patent System. The Commission identified the need to "make U. S. patent practice more compatible with that of other countries, wherever consistent with the objectives of the U. S. patent system."⁵ Whether one agrees with the need for uniformity or not cannot affect the need to examine alternatives in relief from a commercial practice outlawed in a number of commercially significant nations.

The famous British case of *Bismag v. Amblins* 57 R.P.C. 209 (1940) is perhaps most indicative of the trend among Paris Convention countries with regard to the competitive name-dropping area of the law of unfair competition. In the facts of that case, the defendant lesser-known brand was advertising a substance-by-substance comparison of his stomach powder with that of the plaintiff's well-known brand followed by a quotation of a lower price. After wrestling with the construction of the British trademark law, the court was able to conclude that confusion as to origin was not necessary for relief and therefore found for the plaintiff.

The detailed comparison in competitive name-dropping is undoubtedly the strongest case for granting relief abroad or in this country since there is little doubt but what the lesser-known brand is getting a "free ride" on the investment of the well-known brand.⁶ Actually, however, competitive name-dropping as such is not the only way of obtaining a "free ride." It might be argued that the mere mention of a brand name in an advertisement is *prima facie* evidence of a "free ride." There is probably good ground for such a statement

1966, *Summary of ABA Proceedings for Patent, Trademark and Copyright Law*, (August, 1966), p. 163.

⁵ *Report of the President's Commission on the Patent System*, (1966), p. 4

⁶ *Harvard Law Review*, Vol. 55, (1942), p. 1214; *Minnesota Law Review*, Vol. 26, (1941-42), p. 748; *Virginia Law Review*, Vol. 28, (1941-42), p. 659.

since it can be presumed that no one advertises in a given form unless they are deriving a benefit from that form. In such a case, the benefit must in part be attributed to the mention of the competitive well-known brand since the advertiser would not mention the brand if he foresaw no benefit to himself.

THE SCOPE OF RE-EXAMINATION

However, the re-examination herein is not concerned with the possible breadth of relief and the necessary public policy considerations related thereto. Rather, the re-examination is limited to the present nonavailability of relief from competitive name-dropping at the federal level⁷ and the possibility of future relief under existing or future unfair competition law, namely, federal trademark law. Competitive name-dropping has been chosen, not because it is the only practice whose treatment in the United States differs from that of certain foreign countries, but because it represents a practice now being rejected or soon to be rejected by commercially significant nations while it is accepted in the United States. It is therefore deemed a proper subject of inquiry to determine the feasibility of compliance with a reshaped foreign standard of trade ethics under our existing unfair competition law or compliance by new legislation.⁸

The re-examination has been limited to the trademark law since there is no other federal unfair competition law as such, except for Section 5 of the Federal Trade Commission Act, which has never served as the basis of relief for anything approaching competitive name-dropping.⁹ This is true even though the language of Section 5 could well support relief:

. . . unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce are declared unlawful . . .

Although the Federal Trade Commission has entered the arena of false advertising on the basis of Section 5,¹⁰ the Commission has directed a substantial share of its efforts to any method of competition which restrains trade, lessens competition or tends to create a

⁷ *Campbell Soup v. Armour*, 175 F. 2d 795 (1949); *Taussig v. Wellington Fund*, 187 F. Supp. 179 (1960).

⁸ S. 1154, 90th Cong., 1st Sess.

⁹ 15 U.S.C.A. § 45.

¹⁰ *Michigan Law Review*, Vol. 64, (1966), p. 1274.

monopoly. Since these efforts are arguably in conflict with the granting of relief from competitive name-dropping, the total paucity of cases wherein the Commission was seeking relief is not at all surprising.

RELIEF UNDER THE TRADEMARK ACT OF 1946

Therefore, presently available relief at the federal level, if existent, must of necessity be limited to relief under the Trademark Act of 1946, as amended by the 1962 Trademark Housekeeping Act.¹¹ The Trademark Act provides for remedies in two different sections.

*Section 43(a)*¹²

This section is commonly referred to as the false advertising section of the Trademark Act and is really only partially related to trademarks. The fact that it is referred to as the "false advertising section" suggests a limitation on the relief available under this section. In the district court case, *Société Comptois de l'Industrie Cottonnière, Etablissements Boussac v. Alexander's Department Stores*,¹³ the court found that competitive name-dropping by advertising "copies" of Dior was not deceptive so as to provide a remedy for Dior under Section 43 (a). The court found Section 43 (a) "... limited in its effect to cases of deception. . ." An examination of Section 43 (a) leaves little doubt that the necessity of deception was incorporated in it:

Any person who shall affix, apply, or use in connection with any goods or services, on any container or containers for goods, a false designation of origin, or any false description or representation, including words or other symbols tending falsely to describe or represent the same. . .

Each alternative wrong includes the word "false" or "falsely" and no court has read these words out of this section of the statute.

*Section 32(1)*¹⁴

In order to fully appreciate the scope of this section, a re-examination of the legislative history of the Trademark Act would appear to be in order. As is the case with most controversial bills which have long legislative histories, the amendment was extensive

¹¹ 15 U.S.C. § 1051-1100 (1946, 1962).

¹² 15 U.S.C. § 1093 (a) (1946, 1962).

¹³ 190 F. Supp. 594 (S.D.N.Y. 1960) Aff'd 229 F. 2d 33 (2nd Cir. 1962).

¹⁴ 15 U.S.C. 1082 (1) (1946, 1962).

with relief sufficiently broad at inception to provide a remedy for competitive name-dropping. It is the subsequent narrowing through a long legislative history which sheds a good deal of light on the question at hand; namely, was competitive name-dropping intended to be covered by Section 32 (1) of the Lanham Act?

Section 1 of the first trademark bill, the forerunner of Section 32 (1) of the present act, was introduced on January 19, 1938, and reads as follows:

That it shall be unlawful (1) to introduce or deliver for introduction or to receive in commerce any copy, counterfeit, or colorable imitation of any trade mark registered under this act, or (2) to use in commerce any such copy, counterfeit, or colorable imitation upon or in connection with the merchandise set forth in the certificate of registration or merchandise of such a character that the use of the copy, counterfeit, or colorable imitation in connection therewith is likely to cause confusion or mistake or to deceive purchasers.¹⁵

Note that the subsections 1 and 2 are set forth so as to provide alternative remedies to alternative violations. The violation set forth in subsection 2 requires use in commerce so as to cause "confusion or mistake or to deceive purchasers" and does not encompass a practice of competitive name-dropping wherein there is no confusion. On the other hand, subsection 1 prohibits the mere introduction of a copy of a trademark so as to encompass competitive name-dropping since there is no requirement for confusion. The construction of the bill is quite clear in that confusion is used only in relationship to "use" which occurs only in subsection 2.

The original section was reworked in the next year and introduced into Congress on February 28, 1939, in the following form:

Any person who shall without the consent of the registrant thereof reproduce, counterfeit, copy, or colorably imitate any trademark on either register provided by this Act, and shall affix such reproduction, counterfeit, copy, or colorable imitation to merchandise of such a character that the use thereof is likely to cause confusion or mistake or to deceive purchasers or to labels, signs, prints, packages, wrappers, receptacles, or advertisements intended to be used upon or in connection with the sale of such merchandise, and shall use or have used such reproduction, counterfeit, copy, or colorable imitation in commerce, shall be liable in a civil action by the registrant for any or all of the remedies hereinafter provided.¹⁶

Once again, there are two alternative wrongs set forth: Use with regard to merchandise as well as advertising, but unlike the earlier

¹⁵ H.R. 9041, 75th Cong., 2nd Sess., § 1 (1938).

¹⁶ H.R. 4575, 76th Cong., 1st Sess., § 32 (1939).

bill, both violations involve confusion. The phrase "such merchandise" used with regard to advertising has its antecedent basis in the statement of the first violation, "merchandise of such a character that the use thereof is likely to cause confusion or mistake or to deceive purchasers." Thus a reading of this bill can lead only to the conclusion that relief from competitive name-dropping was not intended.

On June 1, 1939, a somewhat questionable construction was introduced in the following form:

Any person who shall in commerce without the consent of the registrant (a) reproduce, counterfeit, copy, or colorably imitate any mark on either register provided by this Act or (b) shall apply such reproduction, counterfeit, copy, or colorable imitation to merchandise or services of such a character that the use thereof is likely to cause confusion or mistake or to deceive purchasers or to labels, signs, prints, packages, wrappers, receptacles, or advertisements intended to be used upon or in connection, or (c) shall otherwise falsely indicate that the goods or services are the goods or services of a person who shall have registered a mark under this Act, shall be liable in a civil action by the registrant for any or all of the remedies hereinafter provided.¹⁷

The important question raised by this form of Section 32(1) is whether "otherwise falsely indicate" has an antecedent basis in subsection (a). If it does not have an antecedent basis in subsection (a), there is no requirement of confusion in subsection (a) and competitive name-dropping would at least be a literal violation. Such a reading would be broad enough to reach the publisher of an advertisement in which competitive name-dropping occurred or to reach the advertiser himself.

The ambiguities of the June 1, 1939 version of Section 32(1) were removed to a large extent by the June 29, 1943 version of the bill.¹⁸ This version, which ultimately became the Trademark Act, was in substantial conformity with the February 1939 version wherein the word "such" found its antecedent basis in an earlier reference to merchandise on which confusion was likely to occur. Thus, the basis for relief wherein confusion was not required appears to have been omitted from the act. Any lingering doubts as to the requirement of confusion were laid to rest when the 1962 Trademark Housekeeping Act incorporated the phrase "likely to cause confusion, or to cause mistake, or to deceive" in both of the alternative violations.

¹⁷ H.R. 6618, 76th Cong., 1st Sess., § 32 (1939).

¹⁸ H.R. 82, 78th Cong., 1st Sess., § 32 (1943).

The only case of competitive name-dropping arising under Section 32(1) of the Trademark Act was the previously discussed *Alexander's Department Store* case in which relief was denied. In that case, the court emphasized the need for confusion under Section 32(1) saying:

The question remains whether the Lanham Act has changed the rule of the *Prestonettes* Case. That act created no enforceable claim in favor of the trademark owner in the absence of deception.¹⁹

That opinion has been repeatedly expressed by the commentators.²⁰ Yet, the scope given the Trademark Act by that court and that generally ascribed to it by the commentators do not appear to be wholly consistent with the scope given it by the Senate Committee reporting the bill. That committee when reporting stated:

The purpose underlying any trademark statute is twofold. One is to protect the public so it may be confident that, in purchasing a product bearing a particular trade-mark which it favorably knows, it will get the product which it asks for and wants to get. Secondly, where the owner of a trade-mark has spent energy, time, and money in presenting to the public the product, he is protected in his investment from its misappropriation by pirates and cheats. This is the well-established rule of law protecting both the public and the trade-mark owner.²¹

The eye-catching word in the previous quotation is "misappropriation" which of necessity recalls the famous though seldom applied doctrine of the Supreme Court in the *International News Service v. Associated Press*.²² It is at least interesting to speculate as to the thoughts of that committee in reporting the bill, especially so in light of the legislative history. Admittedly, the literal construction of the act leaves little question in itself, but the literal construction of this report does raise a question as to the applicability of the *Associated Press* doctrine to the issue at hand, namely, competitive name-dropping.

RELIEF UNDER THE ASSOCIATED PRESS DOCTRINE

The question to be considered here is not one of possible relief alternative to the Trademark Act since this would not provide the necessary national uniformity. Rather, the question is one of the

¹⁹ 190 F. Supp. at 603.

²⁰ *NYU Law Review*, Vol. 32, (1956), p. 1029; Nims, *Unfair Competition and Trademarks*, (4th ed., 1947), pp. 727-8.

²¹ S. Rep. No. 1333, 79th Cong., 2nd Sess. (1956).

²² 248 U.S. 215 (1918).

applicability of the *Associated Press* doctrine to provide an extension of relief under the Trademark Act. In other words, the mere ad hoc application of the *Associated Press* doctrine by state courts or federal courts as a basis of relief in itself, without the benefit of a statutory framework, does not lend itself to a stable and uniform international trade situation necessitated by the existence of international treaties. The *Associated Press* doctrine would have to become part and parcel of the Trademark Act itself to effect the necessary uniformity.

Before answering the question of relief from competitive name-dropping by extending the Trademark Act through the *Associated Press* doctrine so as to avoid the requirement of confusion, an examination of the *Associated Press* doctrine as it exists today appears to be in order. The doctrine was first formulated and applied in the *International News Service v. Associated Press*, where it was used to enjoin the International News Service from appropriating the news gathered by the Associated Press. The Court found that news "has all the attributes of property necessary for determining that a misappropriation of it by a competitor is unfair competition because contrary to good conscience."²³

Although the language of the case is sweeping, the doctrine has been applied sparingly in only three areas: news, recordings,²⁴ and professional sports.²⁵ From the application of the doctrine in these areas, a series of elements have emerged which have developed as crucial factors in obtaining relief.

The first of these elements is competition. Although competition is not a necessary element as pointed out by *Ettore v. Philco Television Broadcasting Corporation*,²⁶ it is generally recognized as fundamental because of the basic statement of the doctrine in the *Associated Press* case itself. Even if the element of competition is considered necessary, it does not provide a stumbling block for relief from competitive name-dropping since competition is inherent in the practice and essential to successful advertising in this form.

The second of these elements is disparagement which may have served as a substitute for competition in the *Ettore* case. In that case, the plaintiff Ettore was seeking damages for the telecast of a film revealing his worst rounds in a fight with Joe Louis and failing to

²³ 248 U.S. at 240.

²⁴ *Waring v. WDAS*, 194 Atl. 631 (1937); *Metropolitan Opera v. Wagner Nichols*, 101 N.Y.S. 2d 483 (1950).

²⁵ *Ettore v. Philco Television*, 229 F. 2d 481 (3rd Cir. 1956).

²⁶ *Supra* note 24.

show his best rounds. Although part of his theory for recovery was based on the disparagement of his abilities as a boxer, the essence of relief was based on his right to control the showing of his boxing performance, a property right. At best, disparagement is nothing more than an alternative grounds for relief under the *Associated Press* doctrine. The lack of disparagement could not therefore be fatal in itself to relief for competitive name-dropping.

A third element is "palming off." Of particular interest with regard to this element is the case of the *Metropolitan Opera v. Wagner Nichols Recording* wherein the Court specifically rejected the requirement of a "palming off."²⁷ The Supreme Court of New York stated:

With the passage of those simple and halcyon days when the chief business malpractice was "palming off" and with the development of more complex business relationships and, unfortunately, malpractices, many courts, including the courts of this state, extended the doctrine of unfair competition beyond the cases of "palming off."

This case is of particular significance since the lack of "palming off" or confusion in competitive name-dropping is the stumbling block for recovery under the Trademark Act.

Concluding therefore that competition may well be necessary for recovery under the *Associated Press* doctrine while disparagement and confusion are not, the question is one of applying this doctrine to extend a federal statute to cover a set of facts not falling within the literal construction of that statute. The extension of a federal statute by the *Associated Press* doctrine has in fact been done in an area quite analogous to trademark infringement. That area is copyright infringement.

The case in point is *Addison Wesley Publishing Company v. Brown* wherein the plaintiff was a publisher of college textbooks and seeking relief from the publication of answers to his questions on the theory of copyright infringement and unfair competition.²⁸ The facts would appear to be sufficiently clear as to the absence of literal infringement under the Copyright Law, since the defendant's work did not involve a copying of expression. The court initially granted a temporary injunction on the *Associated Press* doctrine and cited the *Metropolitan Opera* case as containing the governing principles and a complete review of the law. Ironically the court in the *Alexander Department Store* case had distinguished over the *Metropolitan*

²⁷ *Supra* note 23.

²⁸ 223 F. Supp. 219 (E.D.N.Y. 1963).

Opera case by arguing that the interception of a broadcast in the latter case was taking of property not within the public domain. The court in the *Alexander Department Store* case found the use of a registered trademark to be wholly within the public domain and the *Associated Press* doctrine therefore not applicable. Yet, the court of the *Addison Wesley* case applied the *Metropolitan Opera* case to a copyright registered under the Copyright Law and therefore completely within the public domain.²⁹ The fact that these varying applications of the *Metropolitan Opera* case occurred within a single circuit casts some question upon the application of the *Associated Press* doctrine in areas where federal statutes are involved.

It is certainly not inconceivable that the Southern District of New York would have decided the *Alexander Department Store* case to the contrary and in conformance with their decision in the *Addison Wesley* case. In fact, final relief granted in the *Addison Wesley* case indicates a ready willingness on the part of the court to extend the Copyright Law. The court actually claimed to have found copyright infringement, or at least conduct which should be restrained by Congress in light of the Constitution. Of particular interest was the following language:

Of preponderant importance to the court in evaluating the merits in doubtful cases so that it may arrive at its decision with a minimum of legal justification is the recognition by it of "the economic philosophy behind the constitutional clause empowering Congress to grant patents and copyrights. . . ." It is clear that defendants parasitical excrescence upon plaintiffs distinguished and useful works profits defendants alone. . . . If the issue is at all doubtful—and in the court's view it does not appear to be—such doubt should in fulfillment of the constitutional mandate, be resolved in plaintiff's favor.³⁰

A similar step in the area of trademarks, based on the constitutional mandate to regulate commerce, could hardly be deemed impossible in light of this court's rather free-wheeling application of the Copyright Law. Such a free-wheeling application could very well lead to the availability of relief from competitive name-dropping under the Trademark Act as it exists today.

CONCLUSION

Although conformity with the present and prospective laws of unfair competition abroad does not render new legislation absolutely

²⁹ 17 U.S.C. §§ 1-26 (1958).

³⁰ 223 F. Supp. at 228.

imperative, it is desirable. An alternative to new legislation does exist through the extension of the present Trademark Act by presently available tools of the judiciary. That these tools are available and used by the judiciary when so wished is apparent from contrasting the *Addison Wesley* and *Alexander Department Store* opinions delivered by different district courts within a single circuit. However, the uniform application of the law necessary to satisfy international uniformity requisite to heavy international trade could only be effected through the extension of the Trademark Act by the Supreme Court. While the likelihood of a case concerning competitive name-dropping reaching the Supreme Court may be increased because of the emphasis upon related forms of advertising, the probability is still small, and the probability of a decision condemning competitive name-dropping is even smaller.

As a consequence of these unfavorable probabilities, I would urge new legislation in this area. Of course, pending legislation which could cover the ills of competitive name-dropping has been around for years. Currently, the relief suggested is embodied in S. 1154,³¹ which is a proposed amendment to the Trademark Act, and would amend Section 43 of the Trademark Act as follows:

Any person who shall engage in any act, trade practice, or course of conduct, in commerce, which . . . (5) results or is likely to result in misappropriation of quasi-property of another, not otherwise protected by Federal statute, or (6) without being limited to or by the foregoing subsections (1) through (5), is otherwise contrary to commercial good faith or to normal and honest practices of the business or vocational activity in which he is engaged, shall be liable in a civil action for unfair competition.

While subsection (5) could provide relief under the previously discussed *Associated Press* doctrine, it would of course require a determination by the courts that competitive name-dropping is indeed a taking of "quasi-property." Subsection (6) might appear to be a surer basis of relief in conformity with our treaty obligations. It should be noted, however, that subsection (6) only condemns conduct contrary to "honest practices of the business." The fact that related forms of competitive name-dropping have been practiced for some time might exempt it. Because the courts might only find competitive name-dropping a violation of any resulting legislation if and only if a clear Congressional intent of condemnation is shown, I would hope that any hearings would include a probe of competitive name-dropping. It is certainly not an issue to be taken lightly in view of the trends abroad and current domestic practices in advertising.

³¹ *Supra* note 8.

An Analysis of the Proposed Deferred Examination System

ROBERT J. LASKER*

SUMMARY

THIS ARTICLE PRESENTS AN ATTEMPT to research facts that would aid in understanding the effects the proposed deferred examination system would have on the patent system and the underlying rationale for its proposed introduction into the U.S. patent system.

Such efforts would appear to indicate almost a complete lack of factual information relating to the subject that would corroborate any meaningful and definite conclusions. A few of the underlying premises for a deferred examination system are discussed.

BACKGROUND

EXECUTIVE ORDER 11215 OF APRIL 8, 1965, created a President's Commission to make a study of our patent system in the context of present-day and future anticipated conditions and to make recom-

* This paper was submitted by the author, as a third-year law student, in partial fulfillment of the requirements for the Seminar and Lecture Series given by The PTC Research Institute and faculty of The National Law Center of The George Washington University.

mendations to improve the effectiveness of the patent system. The Executive Order stated that a "Major objective of the patent system . . . [is] to insure that the patent system will be more effective in serving the public interest in view of the complex and rapidly changing technology of our time. . . ." The committee membership was selected on July 23, 1965 and after 13 meetings, beginning August 15, 1965, the Commission released its Report to the President, on November 17, 1966.¹ The recommendations of this *Report of the President's Commission on the Patent System* were implemented in the Patent Reform Act of 1967 which was submitted by the President of the United States to Congress on February 21, 1967.²

OBJECTIVES OF THE PATENT SYSTEM

This paper is concerned solely with the proposed deferred examination which was submitted as Recommendation 9 by the President's Commission on the Patent System, and which appears as Chapter 18 of the Patent Reform Act of 1967.³ (Chapter 18 is reproduced in Appendix A at the end of this paper and Section 123 of Chapter 1 appears as Appendix B.)

To the probable dismay of the reader this paper presents more questions than answers. It is the author's sincerest hope, however, that these questions and doubts about the "effectiveness" of the proposed deferred examination system are intelligent and will give those who have far more experience in these matters some cause for reflection.⁴

¹ Letter of transmittal accompanying the *Report of the President's Commission on the Patent System*; Harry Hunt Ransom and Simon H. Rifkind, Cochairmen, November 17, 1966.

² S. 1042 and H.R. 5924, 90th Cong., 1st Sess. (1967).

³ Recommendation 9 of the *Report of the President's Commission on the Patent System* uses the terminology "Optional Deferred Examination System." As implemented in ch. 18 of H.R. 5924 (S. 1042) it is titled "Deferred Examination." (See Appendix A.) §191 of ch. 18 relates to the authority given the Secretary of Commerce, the option to defer examination to all applications or to applications in specific classes if he determines such action to be in the public interest. §§192-194 provide for the method of deferred examination. This paper is concerned with these latter sections for implementing a deferred examination system regardless of whether such examination is optional or not.

⁴ The author has approximately four years of patent experience and has been a registered patent agent since September, 1965.

Of one thing the author is convinced. There has been much written in the past five years concerning the need for, desirability or non-desirability of, or the effectiveness or non-effectiveness of a deferred examination system. Some facts (perhaps too few facts), figures and statistics have been brought forth in a multitude of arrays and combinations to support or prove a particular contention on this subject.⁵ Although there has been much written on this subject the author's research has convinced him that there is little fact to support the various statements or conclusions which have evolved. As could be anticipated, there are often different interpretations of the same facts.⁶

It is generally conceded by at least the vast majority of those who show concern for the patent system that it has made an enormous contribution to the economic and technical progress of this country. In the words of the President's Commission,

The members of the Commission unanimously agreed that a patent system today is capable of continuing to provide an incentive

⁵ For example, consider the following:

- (a) "Commentary to Proposed Modification of the Dutch Patent Law," *JPOS*, Vol. 43, No. 11 (November 1961), p. 743.
- (b) Richard A. Wahl, "How to Reduce Delay in Securing Patents," *IDEA*, Vol. 9, Conference Number (1965), p. 75.
- (c) W. Scott Railton, "Examination System and the Backlog Problem," *IDEA*, Vol. 9, No. 3 (Fall 1965), p. 487.
- (d) E. J. Gorn, "Modified Deferred Examination System," *IDEA*, Vol. 9, No. 1 (Spring 1965), p. 103.
- (e) J. T. Roberts, "Reappraisal of the American System of Patent Examining," *JPOS*, Vol. 48, No. 3 (March 1966), p. 156.
- (f) H. R. Mayers, "Road Repairs for the Patent System?," *IDEA*, Vol. 9, No. 4 (Winter 1965-66), p. 609.
- (g) P. A. Rose, "U. S. Patent Examination System—Why Change A Good Thing? (For the Wrong Reasons)," *IDEA*, Vol. 9, No. 1 (Spring 1965), p. 95.
- (h) R. C. Brown, Jr., "Whither Goes the U.S. Patent System?," *IDEA*, Vol. 9, No. 2 (Summer 1965), p. 251; and *JPOS*, Vol. 48, No. 1 (January 1966), p. 42.
- (i) Heinz Bardehle (German Patent Attorney), "The Novelty Principle and Deferred Examination," *JPOS*, Vol. 48, No. 6 (June 1966), p. 367.
- (j) David L. Ladd *et al.*, "Resolved That the U. S. Adapt a System of Deferred Examination Similar to the Present Dutch System." (Remarks at APLA meeting January 28, 1965). *APLA Bulletin* (March 1965).
- (k) John Boyle, "Long Delay in Granting Patents," *JPOS*, Vol. 46, No. 3 (March 1964), p. 175.
- (l) M. N. Meller, "Treating the Cause and Not the Symptoms—A Case for Delayed Examination," *JPOS*, Vol. 46, No. 4 (April 1964), p. 247.

⁶ The facts often quoted are related to such things as the backlog of pending applications in the Patent Office, technological growth, classification system, Patent Office Examiner turnover, etc.

to research, development, and innovation. They have discovered no practical substitute for the unique service it renders.⁷

Because the provision for deferred examination as it is set forth in the proposed Patent Reform Act of 1967 had its genesis in the *Report of the President's Commission on the Patent System*, a meaningful analysis of deferred examination must begin with a consideration of the objectives considered by the Commission in making their recommendations to the President. Six broad objectives were stated by the Commission in their report as follows:⁸

1. To raise the quality and reliability of the U. S. patent.
2. To shorten the period of pendency of a patent application from filing to final disposition by the Patent Office.
3. To accelerate the public disclosure of technological advances.
4. To reduce the expense of obtaining and litigating a patent.
5. To make U. S. patent practice more compatible with that of other major countries, wherever consistent with the objectives of the U. S. patent system.
6. To prepare the patent system to cope with the exploding technology foreseeable in the decades ahead.

In regard to their specific recommendation of a deferred examination system⁹ the Commission more specifically stated,

Justifications for an optional deferred examination system are that not all applications for patents are of the same value, that it is not good economic practice for the Patent Office to devote substantial effort to applications having little value, and that the applicant and his competitors are in the best position to select out such applications.¹⁰

With the above objectives and statement of the Commission in mind let us analyze deferred examination as set forth in the proposed Act.¹¹

MOTIVATION FOR THE COMMISSION'S RECOMMENDATIONS

The foundation for the Commission's recommendation¹² for a

⁷ The *Report of the President's Commission on the Patent System*, (November 17, 1966), p. 2 (Introduction).

⁸ *Id.*, pp. 3, 4.

⁹ See note 12 *infra*.

¹⁰ See note 7, Recommendation 9, p. 20.

¹¹ See Appendix A (H.R. 5924) Ch. 18, §§191-194; also see note 3.

¹² There appears to be some difference of opinion as to whether the Commission actually recommended a deferred examination system (or optional deferred examination system if the reader prefers). This has, perhaps, been generated by the opening statements in the Report regarding Recommendation 9 (See note 10, pp. 19 and 20). For example, the American Bar Association (Section of Patent,

deferred examination system is quite obviously the fact that "such a system should reduce the number of applications requiring prompt examination."¹³ There has been much conjecture about the effect that a deferred examination system would have in reducing the current Patent Office backlog and/or the number of applications requiring examination filed under the Act's provisions, i.e. examination to limit scope of claims. It has been stated that our present patent examination system is in effect a deferred examination system¹⁴ since applications now have an average pendency of some two and a half years. Consequently, the deferred examination system would merely be a recognition of an existing fact.¹⁵ Presumably the budget of the Patent Office will not be materially increased, mechanical searching and information retrieval systems have not reached the required sophistication to be of any great benefit, and presumably the number of patent applications filed before the Patent Office will remain at essentially the same rate with a deferred examination system as under the existing laws.

FEEDBACK FROM THE DUTCH SYSTEM

All other factors being equal, the effectiveness of the deferred examination system must then be contingent upon a significant reduction in the number of applications requiring an examination for novelty and obviousness. Supporters of a deferred examination system have contended that the number of applications requiring examination under the Dutch deferred system, which was put into effect January 1, 1964, indicate that a deferred examination system in

Trademark and Copyright Law) has apparently considered only optional deferred examinations as set forth in §191 of the proposed Act (See Report of Committee 101 of the ABA, Section of Patent, Trademark and Copyright Law, May 1966 [?], Subject 12: "Standby Authority for Optional Deferred Examination—Proposed Resolution 11.") There is no further specific resolution *re* deferred examination in this report.

This author considers the President's Commission to have recommended deferred examination based on a consideration of Recommendation 9 as a whole. Such a position is not inconsistent with the opening paragraph to this recommendation:

The Commission clearly favors a high quality immediate examination system if it can be maintained without a constantly increasing backlog.

¹³ See note 10.

¹⁴ Comments of Brown Morton, former president of APLA, in the panel discussion of the Spring Meeting, January 20-21, 1966, *APLA Bulletin* (January-February 1966), pp. 72-74.

¹⁵ *Ibid.*

this country would likewise result in a significant decrease in the number of applications requiring examination.¹⁶

The apparent rationale behind the Dutch deferred system is that the median life of a Dutch patent is six to seven years after its date of grant and hence the Dutch anticipated that approximately 50 percent of the patent applications filed would be abandoned before a critical examination was required.¹⁷ Beginning January 1, 1964, when deferred examination became effective, a review of the applications filed in Holland having a pendency of nine months indicated that an examination had been requested in 33.6 percent of all the applications filed during that period.¹⁸ Thus, some observers¹⁹ have concluded that deferred examination has resulted in the reduction of some 66.4 percent of applications requiring examination. However, if the average monthly requests for examinations are considered and a projection made to the end of the deferred examination period at five years based on this average rate, there is an indication that between 40 to 50 percent of the applications will have required a critical examination.

However, this is not the whole story. The above percentages are for the *total number* of applications filed in Holland and one must consider the fact that in Holland 80 percent of the applications filed are of foreign origin and the remaining 20 percent are of Dutch origin. When the above percentages are examined on the basis of this dichotomy rather startling projected results are revealed. For example, taking the same sample as above and considering only applications of Dutch origin indicates that examination has been required in 67 percent of the cases and projections based on the average monthly requests indicate that some 80 to 90 percent of Dutch originated cases will require examination before the five-year deferred period expires. It is significant to note that in the United States approximately 80 percent of the applications filed are of domestic origin and the remaining of foreign origin. Consequently, it may not be unreasonable to expect, based on the foregoing projections of the Dutch experience, that perhaps 80 to 90 percent of the domestic originated applications filed in this country will require an examination before expiration of the five-year deferred period.

¹⁶ See note 5 (l).

¹⁷ See note 5 (e).

¹⁸ *Id.* The statistics in the following passages relating to the Dutch system are from the article in note 5 (e).

¹⁹ See note 5 (l).

CORRELATION OF DUTCH RESULTS IN THE UNITED STATES

It is recognized that the 80 to 90 percent figure is a projection and it is not unreasonable to assume that the average monthly request rate for examinations in Holland will experience some decrease. This of course would result in a lower percentage of Dutch originated applications requiring a critical examination. Furthermore, this writer is not at all convinced that one can make a valid direct comparison between the projected results of the Dutch deferred system and that which could be expected in the United States. There may be factors or considerations present in the United States having a bearing on the number of applications requiring examination that are not present in Holland. Therefore, a direct comparison between projections based on the Dutch deferred system and the proposed U. S. deferred system may not have a good correlation. Such a correlation would, perhaps, depend on a consideration of the motivations existing in the two countries for the filing of patent applications and, more specifically, the underlying motivation for obtaining patent protection. This paper does not propose to analyze such motivations. However, at least four motivations have been recognized in this country:²⁰

- (1) Filing to prevent invention from being used against the applicant;
- (2) Filing for defensive purposes;
- (3) Filing to obtain patent if possible, if not, retain subject matter as a trade secret;
- (4) Filing to obtain an aggressive right of exclusion.

That such motivations may be important is evidenced by the fact that it is estimated that as many as 30 percent of the applications filed yearly in the United States are for defensive purposes.²¹ If the Patent Reform Act provides a satisfactory substitute for a patent for defensive purposes²² then presumably the number of applications filed would decrease by 30 percent and/or 30 percent of applications filed would not require examination.

²⁰ See note 5 (d).

²¹ See note 5 (e).

²² This may not be true since, for example, publication (§123 of H.R. 5924) does not necessarily satisfy all underlying motivation for defensive purposes. See Appendix B.

"BACKLOG" IN THE UNITED STATES

Perhaps the only sensible conclusion to be drawn from the experience in Holland is to say that not all of the applications filed will require a critical examination. The reader is free to make his own projections or "guesstimates" as to the exact number. There are now some 200,000 patent applications pending in the Patent Office. Should deferred examination be made retroactive²³ then supposedly the backlog could be reduced to something like 160,000 to 180,000 pending applications. Moreover, at the present rate of filing of some 100,000+ applications per year the Patent Office would be required to examine some 80,000 to 90,000 applications per year.²⁴

However, assuming that 80 to 90 percent of the applications will require a critical examination, is this sufficient justification, in and of itself, for the establishment of a deferred examination system? Certainly an argument can be presented to support deferred examination solely on the basis of a reduction of some 10,000 to 20,000, or more, applications per year.²⁵ However, there are other aspects of the deferred examination system which should be examined prior to making any decision as to the "effectiveness" of such a system and whether it will or will not aid in achieving the aforementioned objectives of the patent system.

PUBLICATION AND DEFERRED EXAMINATION

This writer feels that entirely too much emphasis has been placed on the reduction of the existing backlog in the Patent Office and the ability or nonability of a deferred examination system to reduce the number of applications requiring a critical examination. The "backlog problem" has been with us for at least some 30 years and there is reason to believe that it has not impeded the country's economic and technological development.²⁶ It is this writer's belief that the pro-

²³ Presumably this could be accomplished under §191 of H.R. 5924, see Appendix A.

²⁴ After a period from the enactment of deferred examination such that the number of applications requiring a critical examination had reached the projected 80-90% figure. Such a period is necessary since an examination of the 80-90% of applications filed in a given year requiring critical examination will be distributed over the five-year deferred examination period.

²⁵ For example, see quote on p. 423.

²⁶ See note 5 (g). Assistant Secretary of Commerce Hollomon said before the APLA, October 4, 1964, in regard to the backlog problem that it "... threatens

posed publication (see Appendix B) of those patent applications not being critically examined, said publication to take place not less than 18 months nor later than 24 months after the application has been filed, may pose far more serious problems than the present backlog.

The publication of such patent applications is intimately associated with a deferred examination system and is not an isolated aspect of deferred examination. This is an inherent deduction made in view of the objectives stated by the Commission in making its recommendation concerning deferred examination. Under a deferred system the absence of publication would possibly defeat such objectives, and, in particular, those objectives pertaining to an acceleration of the public disclosure of technological information and the ability of the patent system to cope with the exploding technology. There is an underlying rationale that the public is in the best position to select those applications having the greatest value. Unless the public is made aware of what is pending it will not be in any position to provide such assistance.

It is reasonable to ask, "What will be the effects of such publication?" "What is the inducement to the public to impede the issuance of a published application whose claims have no legal status?" "Is the public really in the best position to select the applications to be examined?"

It does not take much reflection to conclude that the mere publication of more technological information will not, in and of itself, provide any material impetus to our economy. Is there not enough technical publication today? According to the *Washington Post* of June 23, 1963, about one million research papers are published annually in 100,000 technical journals. Ask any engineer, chemist, patent attorney or businessman if such information is being used efficiently and to its best advantage. It is submitted that, generally, the technical or business community, much less the beleaguered patent attorney, does not need more disclosure, but rather a means for extracting the valuable information from the existing vast number of publications and its employment in the production and generation of more advanced and improved marketable products.

to slow down invention and innovation, an elementary mechanism for economic and technological developments . . ." The author of the article states that the prompt issue of a patent is not necessary to permit exploitation and dissemination of the technology as much of it is published and/or put into use before the patent disclosing it is issued. The continuous backlog over the last 30 years does not appear to have slowed down the economic and technological development in this country as is evidenced, for example, by the number of patents filed.

This suggests that perhaps more emphasis should be concentrated on the development of mechanical searching and information retrieval systems which would provide the needed means to aid in such an efficient and useful absorption of published information, whether it be technical or nontechnical, instead of further increasing the burden on the public.

PURPOSES OF PUBLICATION

Perhaps it is like comparing peaches with apples to place published patent applications in the same category with the glut of other technological information. After all, patent applications are unique and they convey a specific type of information to the reader. Assuming for the moment that the public will be able to absorb these published applications and extract whatever useful knowledge they desire from them, of what value is such knowledge?

There will undoubtedly be some benefits in that such publication will apprise potential infringers that an application is pending which may pose certain infringement difficulties. Supposedly there will also be an advantage in that competitors will gain some information regarding each other's patent activities and learn what is going on in each other's bailiwick. However, the value of such information is somewhat doubtful in that the proposed publication does not occur until some 18 or 24 months after the filing date. Moreover, the pendency (until issue and publication) of the average patent application is today approximately 30 months with complete examination. Under the proposed statute such publication would reduce this by only some 6 to 12 months. In the fast pace of today's rapidly changing technology this reduction in the length of time may still not provide a significant advantage. This problem could of course be somewhat alleviated by further shortening the time between the filing date of an application and its publication without examination. However, this may tend to cause many individuals to rely on common law trade-secret protection since such early publication would disclose much of their technology to the public without any assurance of protection or secrecy in the event an application is not granted under present law. It appears that we have come full circle and are again at the real worth of a patent as an instrument providing certain property rights. Such publications as we have been discussing may then be nothing less than the deprivation of substantial property rights without any quid pro quo.

EFFECT OF PUBLICATION

In view of the above, the rationale behind such publication is not then merely to inform in the normal sense of the word but to inform the public of pending applications to place the burden on the public to determine the merit and relative value of such published applications as well as to provide prior art to the Patent Office to be used against these pending applications. The burden of such a task may well belong truly in the public domain. However, there may be some cause for reflection as to the public's (industry's) capability to handle this task on a completely decentralized basis. There are at least three separate and distinct problems fostered by such a burden. First, the published applications must be examined to separate the "wheat from the chaff" and a determination made as to those patents having a significant bearing in a particular field of interest. Second, prior art must be found to invalidate or limit the scope of the significant patents. Third, a third party must present such prior art to the Patent Office which would conduct the prosecution of the application as under present practice to anticipate or limit the claims.

It would seem that the large corporations would perhaps be in a better position with their vast resources to cull the published applications to separate the wheat from the chaff, make a determination as to those patents having a significant interest to the company's field of endeavor, and assemble the prior art in an attempt to have such problem application rejected by the Patent Office. The independent inventor or small company, because of their limited resources, would be at a distinct disadvantage. Perhaps such small companies, who would be in the position to least afford it, would have to incur the possibility of a significant risk by default.

Furthermore, to this writer's knowledge patent applications do not generally bear a "commercially successful" label at the time they are written, filed, or even during their pendency. Moreover, it is often the improvement patent providing the necessary ingredient to make something that is only promising, commercially successful. These factors compound the complexity and cost of the first problem noted above. The de-centralization of the effort adds to the wastefulness of such a process because there will be much duplication involved. The economic cost involved might cause business to adopt a "wait and see" or "do nothing" attitude. Although the Patent Office is facing

many problems and obstacles²⁷ (not the least of which is its budget) there are distinct advantages in having such a centralized agency to provide the facilities and effort to protect the public interest.

THIRD PARTY INTERVENTIONS

However, there exists a certain fallacy in the underlying rationale that a third party would necessarily volunteer to submit prior art against any given application which was published in its field of interest even though such information were to be retained in confidence by the Patent Office. Such a third party would be placed in an extremely embarrassing situation should the patent issue with claims having significant scope to pose potential infringement problems. Supposedly the third party would have submitted the best available prior art. The patent has then issued with a strengthened presumption of validity, and consequently, the third party would have inadvertently placed a competitor in a very advantageous position. Therefore, in many situations third parties may prefer to let the chips fall where they may and choose to attack the validity or scope of the claims in the issued patent at the settlement table or before a court.

CONCLUSIONS

It is this writer's contention that the truly significant or major value of a patent is determined by the rights conveyed as measured by its claims. This is the quid pro quo for the inventor's disclosure to the public. If this be true, then the inducement for his disclosure of the invention to the public is the monopoly granted. Conversely, will there be sufficient inducement for the public to prevent such monopoly? In view of the above discussed factors the answer is at least a qualified "No."

It is therefore doubtful that the proposed deferred examination and its attendant requirement for publication of critically unexamined applications will produce the objectives sought by the President's Commission. There are significant questions raised as to the desirability and effectiveness of such a system. There is clearly a need

²⁷ See note 5 (c). General discussion of the examination system and the factors producing backlog, i.e., technological growth, antiquated classification system, Patent Office Examiner turnover, etc.

for much more study and analysis before Chapter 18 of the Patent Reform Act of 1967 is enacted into law.

APPENDIX A

CHAPTER 18—DEFERRED EXAMINATION

§ 191. Initiation of deferred examination system

Upon the issuance of implementing regulations by the Secretary of Commerce, if he determines such action to be in the public interest, the examination of complete applications may be deferred in accordance with the provisions of this chapter and such regulations. The regulations may apply to all such applications or to such applications in specific classes as may be designated by the Secretary of Commerce, filed after the date specified in the regulations and prior to a termination date specified therein or in a subsequent order, and to further proceedings on such applications.

§ 192. Deferment of examination

(a) Notwithstanding the provisions of chapter 12 of this title, the examination of a complete application to which the provisions of this chapter apply shall be deferred unless at the time of filing the applicant requests immediate examination and pays the prescribed fee.

(b) An application, the examination of which is deferred under the provisions of this chapter, shall be examined as to formal matters and other such matters as the Commissioner may prescribe, and action may be taken under sections 132 and 133 of this title to place the application in condition for publication. Notwithstanding the provisions of section 123 of this title, such application shall be published as soon as practicable, except under such special circumstances as the Commissioner shall prescribe.

§ 193. Examination

(a) If a request for examination of an application, the examination of which has been deferred under the provisions of this chapter, accompanied by payment of the required fee is made at any time before the expiration of five years from the earliest effective filing date claimed, such application shall be examined as provided in chapter 12.

(b) The applicant or any other person may make the request under subsection (a) of this section. Where the request is made by the applicant, he shall pay the full examination fee. Where the request is made by any other person, that person shall pay the basic examination fee on the requested application and the applicant shall pay all other fees including any fee for extra claims. The identity of such other person requesting the examination shall be kept in confidence by the Patent Office and no information concerning the same given without authority of such person unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commissioner.

(c) If no request for examination is received within the time specified in subsection (a) of this section, the application shall be regarded as abandoned.

§ 194. Examination of related applications

When examination of a deferred application is requested under section 193 of the title, the Commissioner may call upon the applicant to request examination of any other of his applications which may have been deferred and which claim the date of the first mentioned application or any application the date of which is claimed by the first mentioned application and to pay the fee. Notice shall be given the applicant of the fee due and a time of not less than thirty days shall be set for payment. If the fee is paid within the specified time, examination shall proceed on all such applications concurrently. If the fee is not paid within such time, the applications on which the required fee has not been paid shall be regarded as abandoned.

APPENDIX B

CHAPTER I—ESTABLISHMENT, OFFICERS, FUNCTIONS

§ 123. Publication

(a) Under regulations prescribed by the Commissioner, a pending complete application which has not already been published under the provisions of section 151 of this title, shall be published as soon as practicable after such time, not less than eighteen months and not more than twenty-four months, from the earliest effective filing date claimed, as the Commissioner appoints, except that publication of applications under this subsection may be deferred in circumstances established by the Commissioner when such action will expedite disposition of such applications.

(b) An applicant may, upon the payment of the prescribed fee, request earlier publication of his pending complete application and publication of the pending complete application shall occur as soon as practicable after the request.

(c) Before publication of an application under this section, the applicant may be required, subject to sections 132 and 133 of this title, to place the application in proper form for publication.

Prior Art in an Exploding Technology and the Proposed Patent Statute*

EDWARD J. TROJNAR

SUMMARY

AN ESSENTIAL QUALITY OF A MODERN PATENT SYSTEM is its viability in the face of today's ever expanding technology.

The Report of the President's Commission on the Patent System¹ recognizes as one of its objectives: "To prepare the patent system to cope with the exploding technology foreseeable in the decades ahead."

The purpose of this paper is to investigate how the proposals of the Presidential Commission and the legislation based thereon and presented to the Congress of the United States² tends to meet the objective of "coping" with the prior art generated by the "exploding technology." Toward this end prior art changes under the proposed statute are investigated to determine how these changes will affect the validity of patents and the prompt disclosure of technical advances to the public.

* This paper was submitted by the author, as a third-year law student, in partial fulfillment of the requirements for the Seminar and Lecture Series given by The PTC Research Institute and faculty of The National Law Center of The George Washington University.

INTRODUCTION

A DISCUSSION OF WHETHER A PATENT SYSTEM is able to "cope" with the prior art being generated by the modern technology must begin with a consideration of the meaning of "cope" as it is used in the present context. Essentially, the word "cope" is taken to mean availability and more specifically easy accessibility and findability of prior art. This availability extends to several distinct areas of the public; first, to the Patent Office Examiner who is searching an application to ascertain its novelty and nonobviousness; second, to the potential researcher who is using the prior art as a base from which to begin his work; third, to one who is considering making, marketing or using something new to the art and wishes to determine whether he may be infringing patents in force; and fourth, the alleged infringer seeking to invalidate the patent upon which action is brought. A fifth group, the public at large, may be added as beneficiaries of a system wherein the prior art is available to the above-named groups.

Consequently, the discussion relating to the ability to cope with the prior art generated by the exploding technology includes by implication two other of the Commission's objectives: "To raise the quality and reliability of the U.S. patent"³ and "To accelerate the public disclosure of technological advances."⁴

Indeed, these objectives taken together are basic to the American patent system. Early disclosure does much to foster the constitutional purpose of the patent system, "To promote the Progress of Science and the useful Arts by securing for limited Times to Authors and Inventors the exclusive right to their respective Writings and Discoveries."⁵

The assurance of quality and reliability is necessary to maintain the "interest" referred to by Abraham Lincoln when he noted that, "The patent system . . . added the fuel of interest to the fire of genius."⁶ The grant of a limited monopoly on an invention based on

¹ *Report of the President's Commission on the Patent System*, (Washington, D. C.: G.P.O., 1966), p. 4.

² *Patent Reform Act of 1967*, House Document No. 59, 90th Cong., 1st Sess., (1967). (See also S. 1042 and H.R. 5924.)

³ *Supra* note 1, p. 3.

⁴ *Id.*, p. 4.

⁵ U. S. Const. Art. 1, § 8, Cl. 9.

⁶ Abraham Lincoln, *Lecture on Discoveries, Inventions and Improvements*, (February 11, 1859).

an invalid patent is an illusory reward at best and would serve to destroy the "fuel of interest" to which Lincoln referred.

Commissioner of Patents Edward J. Brenner sees the assurance of quality and reliability of patents as factors which will make patents more respected in the industrial community with the eventual result of decreasing litigation.⁷

THE PRESENT SITUATION

Keeping the above discussion in mind, we may turn to the question of whether the present patent system is able to cope with the rapidly growing flow of technical information. The answer must be made in the negative. It is based upon an admittedly small and biased sample of those patents whose validity is put into question in litigation. The following compilation⁸ made by P. J. Federico for a period from 1948 to 1954 gives some indication of relative numbers.

	Approximate Average Number of Patents Per Year	Percentage of Total
Issued	41,000	100.00
Sued on	780	1.90
Adjudicated in:		
District Courts	140	.34
Courts of Appeals	61	.15
Supreme Court	1	0.002
Total adjudicated, % of issued		.34

While the available statistics are based on a relatively small sample, there is a definite propensity by Courts of Appeal to hold patents invalid. One compilation⁹ finds:

⁷ Statement of Edward J. Brenner, Commissioner of Patents, before Subcommittee No. 3, House Judiciary Committee on Patent Reform Act of 1967, H.R. 5924, (April 17, 1967).

⁸ American Patent System, Hearings before the subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, U. S. Senate, 84th Cong., 1st Sess., pp. 176-185.

⁹ C. Marshall Dann, "Adjudication of Patents Under the 1952 Act," in *The Encyclopedia of Patent Practice and Invention Management*, (New York: Reinhold, 1964), pp. 20-22.

. . . between 1926 and 1931 34 to 40 percent of the adjudicated patents were upheld and found to be infringed. Thereafter the percentage dropped rather steadily until the early 40's when it reached a figure of about 15 percent. After a rise to 25 percent in the late 40's, the percentage again fell to about 15 percent in 1952 and 1953. Since that time it has risen rapidly and has reached for the year 1961 . . . a figure of 36 percent, or only slightly less than in the late 1920's.

Another survey¹⁰ over the years 1950-1965 determined that the Courts of Appeals held 67.3 percent of the patents invalid (Table I, appended).

More interesting is an analysis of the reasons for the holding of invalidity. Failure by the Examiner to cite the most pertinent prior art is the single most important cause of a holding of invalidity. In cases where the "best" art was not cited by the Examiner, about 90 percent of the patents were held invalid. On the other hand, invalidity was found in about 30 percent of the cases where defendants could cite no art more pertinent than applied by the Examiner during the prosecution. Remaining patents found invalid were so found on a variety of grounds ranging such as nonstatutory subject matter, lack of utility and defects of prosecution including double patenting, inoperativeness of disclosure, insufficient disclosure, undue breadth of claims, untimely foreign filing, et cetera.¹¹

The extent to which statistical data derived from litigated patents can be applied to patents in general is doubtful. Certainly it cannot be concluded that approximately two-thirds of all patents in force would be invalid if litigated. The statistics are too meager to justify such an inference. A very strong patent would be respected; on the other hand, a very weak patent would not be litigated by a patentee who realized he did not have a reasonable chance to prevail. To extrapolate from the available data to make any strong conclusions as to the validity of extant patents would appear therefore to be foolhardy.¹² While no inferences should be drawn as to patents in general, the information derived from the validity statistics gives us a method, admittedly wholly imperfect, of evaluating our present system. Indeed, some degree of alarm has been generated in this

¹⁰ H. R. Mayers, *Patent Validity Determinations—Historical Summary and Review of 1963-1965 Results*, General Electric Corporation (Internal Publication, 1966).

¹¹ *Ibid.*

¹² Richard J. Dearborn and R. Bradlee Boal, "Adjudication by Circuits and Acts Involved," *The Encyclopedia of Patent Practice and Invention Management*, (New York: Reinhold, 1964), pp. 22-24.

regard. The inclusion of a specific objective¹³ in the Presidential Commission Report is a reflection of the Commission's concern.

There is, therefore, a suggestion that the quality of the patents produced under the present system is not as high as we would like. There is the further suggestion that the failure to cite the most relevant prior art is one of the causes of this problem. Add to this situation a rapidly growing body of technical information.

Much has been written about the expansion of technical literature and many projections have been made about what the future holds. It is sufficient to observe for one's self. Take *Chemical Abstracts*, an important and much used literature source. The library shelves for the volumes of the five years of 1957-1961 require nearly as much space as the volumes from the 10 previous years of 1947-1956. (See Table 2, appended.) The increase of about 80 percent is a result of the publication of more articles and patents and the institution of new and frequently specialized journals. In addition, the complexity of the subject matter is increasing. Can there be any doubt that the problems outlined must become even more acute?

In 1962, the problem of the proliferation of scientific literature was summarized by the then Commissioner of Patents, David L. Ladd:¹⁴

In our files we have over three million American patents, over seven million foreign patents, and several hundred thousand pieces of technical literature. And we have organized these materials by classes and subclasses according to technology into what many people consider the most sophisticated system of technical classification available. A very few statistics will give you some idea of the magnitude of these files and the problem of maintaining them. There are over 300 classes and over 55,000 subclasses in the classification system. Every year in the Patent Office we need over 3,000 sq. ft. of floorspace to accommodate the additional paper which must be integrated into these files; and we maintain a staff of 75 experienced patent Examiners whose sole responsibility is to carry on a continuing reorganization of these files as required by the proliferation of the materials and new technological developments. (Incidentally, even with this, we are far behind in our reclassification effort. Everybody knows it. Everybody laments it. Nobody knows what to do about it.) We get 1,500 patent applications a week, all of which must be classified, and some of them go into many classes. We issue 1,000 patents a week. All of these, too, must be classified. The chemical literature which goes into our files has doubled in the last eight years.

¹³ *Supra* note 1.

¹⁴ Staff report of the Subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, U. S. Senate, 88th Cong., 1st Sess., (1963), p. 51.

Now the validity of any given patent and ultimately the soundness of the examination system depends upon how thoroughly these files are searched for each application. (Emphasis added.)

It is in the described context that the patent system under the proposed statute must enter and hopefully operate to meet the objectives of the Presidential Commission.¹⁵

OUTLOOK UNDER THE PROPOSED STATUTE

Several of the provisions of the proposed statute will tend to increase the scope of prior art to be added to art already being generated at an increasing rate. The scope of prior art is increased in two ways: by broadening the definition of what prior art is to include materials previously excluded, and by extending the effective dates of certain United States patents to make these applicable as prior art where they are not under the present statute.

The changes in Section 102 of the proposed statute are responsible for a large part of the expansion of what is to be considered prior art.¹⁶ First, the elimination of the restrictive words "in this country" in the present version of 35 U.S.C. 102 (a) and (b) makes public use and knowledge in a foreign country applicable prior art. Second, the publication requirement of the present 35 U.S.C. 102 (a) and (b) is modified to allow "disclosure in tangible form" under the proposed statute.¹⁷ Third, the inventor's own disclosures could, under the proposed statute, be used against him despite the fact that such previous disclosure was less than one year before the filing date of the United States application. The grace period of one year under the present 35 U.S.C. 102 (b) is eliminated in all but certain rather exceptional circumstances. Only when disclosure derived from the inventor is divulged in violation of an obligation not to disclose and such disclosure is within six months of application will the disclosure not bar the issuance of a patent.¹⁸ A subtraction from the prior art should also be noted. Since the owner of an invention can be the applicant under the proposed statute,¹⁹ the situation—under the present law whereby United States patents assigned to applicant are available as references against him (though copending and within

¹⁵ *Supra* note 1.

¹⁶ *Supra* note 2, § 102.

¹⁷ *Supra* note 2, § 102 (a).

¹⁸ *Supra* note 2, § 105.

¹⁹ *Supra* note 2, § 111.

the one-year grace period) because of a lack of correspondence between inventors—is eliminated.

The scope of prior art is also extended by a change in the effective date of United States patent references which rely on foreign priority applications. Under the provisions of the present 35 U.S.C. 102 (e) the effective date of a United States patent reference is its filing date. It has been held that a foreign priority date of a reference (U.S.) patent was not the effective date.²⁰ A change is made under the proposed statute by the definition of "effective filing date" in Section 100 (f) as including any filing date which the application is entitled to under Sections 119 or 120. Thus this section, taken with Section 102 (b) makes a United States patent a reference effective as of its earliest date, whether it be its United States filing date, its foreign priority date under Section 119 or its date under Section 120.²¹

It is apparent that all else remaining equal, the substitution of the proposed statute for the present Title 35 of the United States Code will increase the total amount of prior art to be contended with. Foreign use and knowledge would appear to be of minimum importance, at least at the examination level, since this is not likely to be the kind of information that would be available to the Examiner.

The elimination of the publication requirement will obviate haggling the point which could arise often in this day of novel, diverse communication and documentation techniques.

Of most interest for the purposes of this discussion are the provisions which affect the amount of United States patent art which will be effective as references against a U. S. application.

At this point an assumption will be made, the accuracy of which cannot be easily proved or disproved. It is the proposition that, taking the U. S. patent system as a whole, U. S. patent literature is by far the most important and valuable source of prior art against U. S. applications. This assumption is made after a consideration of the factors which make prior art useful, the veritable impossibility of showing the truth of the assumption, and is a reaction of the author as an observer and a servant of the patent system.

It is recognized that in special technical areas other sources of prior art are greatly relied upon. Examples familiar to the writer, which immediately come to mind, are areas of organic chemistry, particularly organic compounds and their preparation (Class 260),

²⁰ *Eli Lilly and Company v. Brenner Commissioner of Patents*, 153 *USPQ* 95 (C.A.D.C. 1967); also *in re Hilmer et al.*, 149 *USPQ* 480 (CCPA 1966).

²¹ *Supra* note 2.

and pharmaceuticals (Class 167),²² where literature references are of considerable, if not pre-eminent, importance.

It was considered that a statistical analysis of the kind of art cited by the Examiner in the prosecution of U. S. patents might shed some light on what constitutes best prior art. This approach, however, was discarded because the art cited is much more dependent upon availability, presence in the areas searched and its existence in a language comprehensible to the Examiner.

United States patent art is considered most important first, because of its vastness. U. S. patents comprise between one-third and one-fourth of all of the world's patents.²³ Approximately one-fifth of the applications filed in the United States originated abroad and one-sixth of the patents in recent years were to foreign inventors.²⁴ If it is assumed that most of the applications of foreign origin were filed in at least the country of origin it is seen that a substantial share of the extant foreign patents are duplicates of those patented in the United States. Under Secretary of Commerce J. Herbert Holloman in his testimony²⁵ before the House subcommittee on the proposed patent statute estimated that in 1972 approximately 30,000 of 100,000 U. S. applications filed in 1972 will originate abroad and that approximately 60,000 of 100,000 U. S. applications filed will have foreign counterparts. A large and an ever increasing number of foreign patents, therefore, represent duplicates of those in the U. S.

A second reason for the importance of U. S. patent art is the method in which it is classified and cross-referenced. While a foreign patent is formally treated by placing it in the most pertinent U. S. subclass, U. S. patents are, in addition, extensively cross-referenced, mandatorily in subclasses in which any claim would be classified and on the basis of disclosure at the discretion of the Examiner.²⁶ In many Examining Groups, on the other hand, the classification of foreign patents is largely neglected and is several years behind.

A third reason for the importance of U. S. patent art is the quality

²² *The Manual of Classification*, Patent Office, U.S. Department of Commerce.

²³ *Supra* note 14.

²⁴ P. J. Federico, "Historical Patent Statistics 1791-1961," 46 *JPOS* 89, (February 1964).

²⁵ "Commerce Officials Testify on Patent Reform Act of 1967," U. S. Department of Commerce (1967). Statement of J. Herbert Holloman, Acting Under Secretary of Commerce before Subcommittee No. 3, House Judiciary Committee on Patent Reform Act of 1967, H.R. 5924, (April 17, 1967), p. 17.

²⁶ *Manual of Patent Examining Procedure*, (3rd ed.; Washington, D. C.: G.P.O., 1961). §§ 903.07 and 903.03.

of the patent once issued vis-à-vis the prior art. The United States is the only country which examines for novelty and nonobviousness. Many countries such as Great Britain, Canada and Germany examine novelty alone, while a number of countries such as France, Belgium and Italy employ a registration system granting patents to those complying with the formalities.²⁷ The effect expected is that the U. S. patent files contain technological information which is more widely differentiated from the prior art than the files of a country which examines for novelty only, or most certainly than a country which employs a registration system.

It is anticipated that under the proposed act the importance of the U. S. patent as prior art will increase over the assumed importance it now has. The first-to-file provision should encourage early disclosure and first disclosure of any invention sought to be patented in a patent application in this or a foreign country.²⁸ Its publication and availability to the public would be assured from 18 to 24 months from the earliest effective filing date claimed, whether that be the U. S. filing date or the foreign priority date.²⁹ The assured publication, in addition to making the disclosure available as prior art at an earlier date, also assures more rapid dissemination of technological information to the public. Under the present system dissemination and availability as prior art is delayed until publication as a patent is made. Estimates vary as to the average time of present pendency, but about three to three and one-half years appears to be accurate.

The use of the foreign priority date alleged in a U. S. patent reference enhances considerably the value of applicable U. S. patents as prior art. Apparently, a large number of applications would be affected, since the predictions for 1972 indicate that about 30 percent of anticipated U. S. applications will originate abroad.³⁰ Presumably, an overwhelming proportion of these will be originally filed abroad and will qualify as prior art with effective dates up to one year earlier than was ever available previously.

It appears, then, at first blush, that the proposed system succeeds in meeting the objectives of the Presidential Commission in handling the prior art of the exploding technology. Early disclosure should be realized. A greater emphasis is placed on the U. S. patent as prior art which is desirable. Prior art should be more accessible to the

²⁷ *Derwent Patent Manual*, (London: 1962).

²⁸ *Supra* note 2, § 102.

²⁹ *Supra* note 2, §§ 100(f), 123, 119 and 120.

³⁰ *Supra* note 25.

Examiner and as a consequence a primary causation for patent invalidity should be mitigated. The public will have the benefit of the work of others at an early date and technology would be placed in the public domain at an earlier date.

At least one serious problem is foreseen in the hope that is created by the proposed statute. The problem arises from the publication of pending applications. In the face of a technology that is creating an already burdensome supply of prior art the proposed system proposes to publish applications whose novelty has not been assessed by an examination. While the present system has a "filter" for removing duplicates and minor contributions to the art by a thorough examination before publication, the proposed system promises to put into the prior art the discards of the present system. Under the present system about 40 percent of the applications filed never issue and never get published.³¹ It is impossible to determine why abandoned applications go abandoned, but it is safe to assume that a large proportion are abandoned because the applicant agrees with the Examiner that the subject matter is not patentable. With the prospect of about 100,000 applications in 1972,³² we cannot welcome in 1973 or 1974 the publication of a large proportion of those applications because so many will add little that is new to the body of prior art.

A number of commentators have been concerned with the same problem. The Cleveland Patent Law Association fears the duplication that will arise by the publication provision of Section 123 of the proposed statute. As an alternative they propose that publication be made after a determination by the Patent Office that the application contains an allowable claim or after certification by the applicant that a search has been made and the claims are allowable over known and identified prior art.³³

The American Bar Association Committee Resolution with respect to the publication provision urges the retention of the present 35 U.S.C. 122 which requires that patent applications be preserved in secrecy.³⁴ The legislation proposed as a substitute by the American

³¹ *Supra* note 24.

³² *Supra* note 25.

³³ Report of The Cleveland Patent Law Association on the Recommendations of the President's Commission and the Administration-Proposed Patent Reform Bill (1967).

³⁴ Report of Committee 101 of the American Bar Association Section of Patent, Trademark and Copyright Law (1967) dealing specifically with the Report of the President's Commission on the Patent System and S. 1042 and H.R. 5924—Pro-

Bar Association includes a provision for the publication of complete pending application at the request of applicant.³⁵

A similar controversy arose in the early 1950's over the question of whether abstracts of abandoned applications should be published. A memorandum on the subject on behalf of the National Association for Manufacturers urged that the function of the Patent Office was to issue patents and not to serve as a publisher, particularly where no check has been made of the technical merits. It was observed that such publication would be taken by some as having an implied merit by virtue of being conducted under the sponsorship of the Patent Office. Furthermore, the information available was considered to be of doubtful value.³⁶ Similar arguments can be advanced against the publication provision.

The American Patent Law Association, on the other hand, apparently has no difficulty with the publication provision and endorses it as an excellent means of rapid dissemination of technical know-how.³⁷

It is submitted that the publication provision cannot be supported or discarded on the basis of its tendency to fulfill or its failure to fulfill a given objective. Granted that the publication provision will allow more technical information to be made available to the public at an earlier date than under the present statute, it must still be kept in mind that the mere availability of information is not sufficient and also that it must be accessible to be of any value. To clutter our files with useless information does not make much sense, particularly at a time when the body of valuable information is growing so rapidly and we are trying so desperately to handle this information.

It is true that the proposed system makes provisions for relief of the Examiner in certain burdens of the examination of, and particu-

posed Legislation Implementing Such Report, p. 15. See also, Summary of Proceedings, Special Meeting, Washington, D. C., of the American Bar Association Section of Patent, Trademark and Copyright Law (Chicago: Scheffer Press, 1967) in which the Section passed a modified Resolution disapproving of mandatory publication of applications at least until after claims were allowed.

³⁵ Report of Committee 108, American Bar Association Section of Patent, Trademark and Copyright Law, Dealing Specifically with Proposed Legislation as a Substitute for S. 1042 and H.R. 5924. (Chicago: Scheffer Press, 1967.)

³⁶ Harold B. Smith, "Abstracts of Abandoned Applications Should Be Discontinued," 34 *JPOS* 695 (1952). (Submitted as a memorandum to the Commissioner of Patents on behalf of National Association of Manufacturers Committee on Patents.)

³⁷ Report of the Special Committee to Study the Patent System on Review of Recommendations of President's Commission on the Patent System. American Patent Law Association (1967).

larly the citation of, prior art against pending applications. The opposition and revocation provisions of the proposed statute, Sections 136 and 257 respectively, allow third parties to contest the allowability of the application or the validity of the patent. The proliferation of art in the files, however, will tend to hinder the ability of a third party to aid an Examiner in insuring the quality of issued patents by the citation of the best art.

CONCLUSIONS

Any conclusions based on a system yet to be implemented that is intended to operate in a technology which itself is in a state of flux must be largely speculative. It is clear that a rather drastic departure from what we are accustomed to is suggested in the proposed patent statute. We are faced with the obvious problem of an information explosion which will not cure itself and will undoubtedly become more acute with the passage of time. It appears that any statutory changes to be made which do not aid but contribute to existing problems in the area of technological information should not be made without some commensurate easing of the problem in other ways.

It is recognized that the Presidential Commission urges a vast program of information retrieval reclassification, et cetera, but it is also recognized that these programs are in relative infancy.

For the reasons discussed in the body of the paper, it is considered that the proposed statute will place additional burdens on the patent system, particularly through the publication provision. This will adversely affect both reliability of patents and the dissemination of information to the public. Might it not be better to wait for the research efforts urged by the Commission to reach fruition before embarking upon an uncharted path with the proposed system?

APPENDIX

TABLE 1

PATENT VALIDITY DETERMINATIONS FROM COURTS OF APPEALS
1950 THROUGH 1965

Years	Valid		Invalid		Total No.
	No.	%	No.	%	
1950-1954	80	27.8	208	72.2	288
1955	10	28.0	26	72.0	36
1956	21	33.0	42	67.0	63
1957	20	29.4	48	70.6	68
1958	13	27.6	34	72.4	47
1959	18	52.8	37	67.2	55
1960	17	37.0	29	63.0	46
1961	29	53.7	25	46.3	54
1962	24	47.1	27	52.9	51
1963	24	32.4	51	67.6	75
1964	16	22.2	53	77.8	69
1965	28	42.4	38	57.6	66
TOTALS	300	32.7	618	67.3	918

TABLE 2

INCREASE IN PAPERS AND PATENTS IN CHEMICAL ABSTRACTS

Year	Percentage Increase in No. of Abstracts of Papers	Percentage Increase in No. of Abstracts of Patents	Percentage Increase in Total No. of Abstracts
1951	6.7%	3.5%	6.1%
1952	11.2	16.9	12.3
1953	8.6	-2.3	6.7
1954	10.3	-6.9	7.5
1955	10.4	-10.4	7.5
1956	4.5	24.4	6.8
1957	7.9	36.2	11.8
1958	13.6	30.3	16.4
1959	3.1	22.1	6.6
1960	5.9	3.4	5.4

Source: Dale B. Baker, "Growth of Chemical Literature—Past, Present and Future," Chemical and Engineering News, Vol. 39, No. 29(1961), p. 78.

RETROSPECTIONS

This section will include biographies and other reviews of careers, discussion and documentation of events important to the history of inventions and discoveries, anecdotal or historical material pertaining to judicial opinion and legislation, and other subjects of historical interest to the Institute.

Defects of Interference Practice and a Proposed Remedy

JAMES ANGUS WATSON

Preface

After he had been engaged in the practice of patent law in Washington for quite a number of years representing inventors before the Patent Office and the Federal Courts, the late James Angus Watson, who died in the year 1929, decided that he should communicate to others his views with respect to the conduct of interference contests as then controlled by statute and rules of the United States Patent Office. By that time he had become well acquainted with the problems faced by inventors whose patent applications had become involved in priority of inventorship litigations, having represented a number of such persons, and had reached the conclusion that much might and should be done to improve procedures in that area.

He privately printed and distributed a pamphlet in which his recommendations were set forth, no copy of which is known now to exist by the writer of this note. However his handwritten original manuscript was recently found and, knowing of the plan of *IDEA* to publish articles which deal with events of the past as well as problems of the present, and possible problems of the future, this manuscript was submitted as being of possible interest. It appears as originally written save only that certain statistical information which the author

had planned to insert but not actually obtained at the time when the article was written, but which no doubt appeared in the printed text, cannot now be obtained, thus necessitating minor alterations in the text.

Conditions have vastly changed since the article was written and the writer of this note, son of the author of the article, might well have agreed that interference problems should be transferred from the Patent Office to the courts had he then been engaged in the practice of patent law. Today, it is believed, the Patent Office with perhaps some modifications of its procedures can well make the necessary initial decisions, with appeals to the courts available to disappointed inventors.

It is interesting to observe that the author included a recommendation to the effect that the life of a patent should terminate a certain number of years after its filing date, a recommendation now being accepted as constructive and important by the organized patent bar.

Robert C. Watson

INTRODUCTION

THE OBJECT OF THE PRESENT DISCUSSION is to call attention to the fact that an interference between two or more parties in the Patent Office results, in most cases, in injustice to the parties, injury to the public and serious loss to the Patent Office, and to suggest a remedy.

The settlement of priority of invention contests between applicants for patents costs the government directly and indirectly thousands of dollars per annum. These contests, technically termed "interferences," are essentially private disputes between rival inventors to determine which of them is the rightful applicant for a patent. An interference arises when two or more applicants, or a patentee and one or more applicants, claim the same invention, and the sole purpose of the interference is to determine which of them is the first inventor and entitled to a patent. The law under which the present elaborate and expensive practice has grown up reads as follows:

Section 4904. Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall

give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the primary examiner to proceed to determine the question of priority of invention. And the Commissioner may issue a patent to the party who is adjudged the prior inventor, unless the adverse party appeals from the decision of the primary examiner, or of the board of examiners-in-chief, as the case may be, within such time, not less than twenty days, as the Commissioner shall prescribe.

In the following paragraphs we shall discuss in order:

(1) The burden which the interference practice imposes upon the Patent Office;

(2) The expense and delay which this practice unnecessarily imposes upon inventors;

(3) The abuses of interference practice through which unscrupulous persons and manufacturing concerns impose upon or defeat meritorious inventors;

(4) The fact that the delay in issuance of patents on account of tying up applications in interferences is often a serious handicap to industry and is always against public interest as it results, in effect, in extending the monopoly and unduly postponing the time when the public may enjoy free use of the invention in return for the monopoly; and

(5) A proposed change in practice which it appears will largely cure the foregoing defects.

At the outset we take it for granted that the patent laws contemplate that there should be no unreasonable delay between the filing of an application and the granting of a patent thereon, as such delay is clearly against the public interest. Delay prior to filing is in the discretion and at the peril of the inventor.

There are two periods of delay in the Patent Office. One, the time required to examine the application and mold it into allowable form by correspondence with the inventor is necessary, but we believe it can be materially shortened, as will be presently suggested. The second delay is due to the interference practice which often keeps an application pending for two to five years or more after it has been examined and found allowable. This, we believe, can be avoided altogether with great advantage to the Patent Office and, in a larger majority of cases, with benefit to the inventor, and always in the public interest. Of course, the major portion of applications do not become involved in interferences, but the number of interferences is large and worthy of serious consideration.

For many years the Patent Office has been from one month to a year in arrears with its work, some divisions being more in arrears than

others. Some years ago the writer advocated, as a measure of relief, that the law be amended so that the term of each patent would run from the date of the application, which is the law in nearly all foreign countries, instead of from the date of issue. The object of this suggestion was to expedite the examination of applications. It is all too common for the inventor or his attorney to take nearly the full year allowed by law to reply to an Examiner's letter of rejection when reply could usually be made within a few weeks. The result is that when the case comes up for reexamination the Examiner has forgotten all details and must spend considerable time refreshing his memory as to the invention, and the prior art he cited in rejecting it, whereas he could have disposed of the case quickly if the inventor's reply had been received while the matter was fresh in his mind. It is obvious that an inventor would reply, or insist that his attorney should reply, promptly to each official letter if he knew that the term of his patent was running.

Two objections were raised to the above suggestion:

(1) It was urged that the inventor should not be charged with the time required to examine his application. Quite so. Let the law be changed to limit a patent to expire 18 or 19 years from date of application instead of 17 years from date of issue. Then by diligently prosecuting his application the average patentee would enjoy an effective term of over 17 years.

(2) The most serious objection raised to the proposition to make the term of a patent run from the date of the application was that the application might become involved in one or more interferences which might delay its allowance for several years, and that this delay, for which the inventor would be in nowise responsible, should not be deducted from the effective term of his patent. This objection is cogent and almost conclusive if present practice is to continue, and it led the writer to consider what *raison d'être* there was for interferences in the Patent Office and to conclude that in the great majority of cases they are detrimental to the Patent Office, the contesting inventors and the public, and beneficial only to the attorneys.

THE INTERFERENCE BURDEN ON THE PATENT OFFICE

The salaries of Examiners and other employees of the Patent Office whose time is entirely devoted to settlement of interference contests amount, for the present fiscal year ending June 30, 1924, to a

considerable sum of money. This does not include trademark interferences which are tried before a separate tribunal and with which we are not here concerned.

The indirect burden of the interference practice is probably greater than the direct expense above noted. There are 48 examining divisions each having a Principal Examiner and a number of assistants and clerks, and much of the time of these examining divisions is taken with the technical and clerical work of framing the issues and "declaring" interferences. One or more law clerks hear and decide motions in interference cases. No income whatever is derived by the Patent Office for the services of any of the employees above mentioned.

Appeals from decisions of the Examiner of Interferences are heard and decided successively by the Appeal Board and the Commissioner or his assistants. The expense to the Patent Office of the appeals is large as compared with the nominal appeal fees. The daily cost to the government of maintaining the Appeal Board with its clerks and overhead expense is considerable and one may occupy a half day or more of its time with an interference for the nominal appeal fee of \$10.

In the year 1922 there were numerous interferences "declared" or instituted, a substantial number of interference appeals to the Appeal Board, interference appeals from the Board to the Commissioner, and many interferences considered by the Law Examiners on various motions.

INTERFERENCES IN THE PATENT OFFICE UNJUST AND EXPENSIVE TO THE INVENTOR

An interference suit between rival patentees in a District Court is brought at the option and pleasure of at least one of the parties, it is tried in a day or two, the judge will consider it on a type-written record and typewritten briefs, and there is but one appeal. The rules are simple and free from red tape. The witnesses and attorneys are under control of the court and irrelevant matter is readily excluded. Ordinarily such a suit will not be instituted unless and until the invention in controversy has been found to be commercially valuable and efforts to settle the matter out of court have proved unavailing.

In strong contrast, the Patent Office says to two or more inventors who have applied for patents for the same invention: "Your applications are found to conflict. Regardless of whether you have had time or

opportunity to ascertain whether the invention is commercially useful or valuable you must fight now or forever hold your peace. You must within 30 days file sworn statements as to when you made the invention and what you have done with it and in future proceedings you must be rigidly bound by these statements. You must then within a certain time bring in your evidence in typewritten form. In taking it you must conform to our technical rules. You must then *print* the testimony and submit it in book form or we will not consider it. If you want to file a brief you must *print* that also and put it in book form. Having done all this the Examiner of Interferences will give you a hearing and render an opinion as to which contestant is the first inventor. If you don't like his decision you can appeal to the Board of Examiners-in-Chief and have another hearing and file another printed brief. If you don't like the decision of the Board you can appeal to the Commissioner and file another printed brief and have another hearing. If you don't think the decision of the Commissioner is correct you appeal to the Court of Appeals of the District of Columbia provided you pay for printing the record of the case and you can have another hearing and file another printed brief. The decision of this court is binding upon the Patent Office and it will later issue a patent to the successful party."

All these proceedings, which must be carried through with the aid of experienced attorneys, cost hundreds and sometimes many thousands of dollars and when the end is reached, in from two to five years or more, it may develop that the invention in controversy has no commercial value or that it has been superseded by something later and better.

It is self evident that a poor inventor is at great disadvantage in such a controversy with a wealthy one or one backed by a large corporation. But this is not all. The interference practice lends itself to frauds and the Patent Office is so bound by its own elaborate code of rules and precedents that it is powerless to remedy them. We can best explain by an actual instance.

ABUSES OF THE INTERFERENCE PRACTICE

In an actual case A, a New England inventor, applied for a patent on an article of jewelry. The article was taken up by a jewelry manufacturing concern and marketed, and it proved to be immensely popular. It was "the style" for the time being. The application was examined after a few months and found to be allowable, but, the

inventor was informed, another application had been filed and his patent must await the result of an interference. Meanwhile the market was being flooded with imitations produced by "pirates" and the value of the invention reduced to zero. The interference was fought through the usual channels and finally decided in favor of A.

There was still some hope of reward for A but before his patent could issue another interfering application was filed and he had to go through a second interference. Both of these interference applications were "faked up" by rivals. One of them was filed in the name of a driver of a brewery wagon and part of his evidence was denounced as a forgery by the patent office. The whole proceeding was disgusting and disheartening to A. The net result was that when his patent was finally allowed the market for his invention was glutted by pirates, the popularity of the article was waning and the patent was hardly worth the final government fee of \$20.

When B, an inventor, solves a problem and puts the result upon the market while his application is pending it is not unusual practice for rivals, and, sometimes, large manufacturing concerns, to file conflicting applications not in good faith, but simply to tie up B's application in interference for the purpose of delaying the issue of his patent, or putting him at a disadvantage in negotiations for his invention, or for a license, or defeating his application entirely if he is unable to stand up for his rights. Such "faked up" interferences are not uncommon and they are discouraging and sometimes disastrous to meritorious inventors.

INTERFERENCE DELAYS AGAINST PUBLIC INTEREST

It goes without saying that delay in the issuance of a patent upon any application due to interference is in derogation of the interests of the public as it deprives the public of a corresponding number of years free use of the invention. As an instance, the double wedge justifier, a vital part of the well known linotype machine, was patented to Mergenthaler. Later, after it had issued, this patent was put in interference with an application of Schuckers.

As an instance of how applications for patents may be held up by interference proceedings when one of the parties, perhaps expecting defeat, is desirous of delaying the issuance of a patent to his adversary, we cite the case of *Coats & Cameron v. Barn*. Both parties had prior British patents and they relied on these patents to establish their respective dates of invention. No testimony was taken and no other

evidence was introduced. The only question to be decided was which of these British patents contained the earliest disclosure of the common invention. Nevertheless, Coats & Cameron, by taking advantage of the numerous motions, petitions and appeals permitted by the interference rules, kept the controversy going for years. When a U. S. patent was finally issued to Barn his British and other foreign patents had nearly expired. In other words the American public will be excluded from free use of this invention for some years after the expiration of the British patent.

Many allowable patent applications are withheld from issue for years due to interference contests, and developing industries are correspondingly embarrassed and often suspended as it is difficult to induce any capitalist or manufacturer to "buy a law suit" or to put money into the development of an invention the title to which is in controversy.

Before reverting to proposed remedies it is to be noted that the decision of the Commissioner of Patents or of the District of Columbia Court of Appeals is not final in any interference case as the losing party may have the whole matter tried *de novo* in a U. S. District Court, and if he loses he may go to the Circuit Court of Appeals. If these courts decide in his favor the Commissioner will issue a patent to him which will practically nullify the patent previously issued to his adversary in the Patent Office.

PROPOSED REMEDY

The remedy for the troubles arising out of the interference practice which we have adverted to and others which space does not permit us to mention must be radical to be effective. What we propose and think entirely feasible is that the law be amended so as to wipe out interference contests in the Patent Office. The changes required in the law to effect this will be quite simple. The machinery for trying interferences in the federal courts already exists as we have already noted, with one trial and one appeal. The Commissioner of Patents, with no control of witnesses and a jurisdiction which does not extend beyond the walls of his office can never try them fully and effectively.

Our suggestion is that if A, B and C, in chronological order, or any number of inventors, apply for patents on the same patentable invention, let the Commissioner issue a patent to A, the first applicant, as a matter of course. If B has filed within two years of A's filing date reject him on A's application or patent. If B can then convince the Commissioner by means of affidavits and exhibits that he had completed the

invention before A filed, issue a patent to B but make his monopoly contingent upon B's ability to prove priority over A in the United States court. It is seldom that a third patent would have to be issued, but if C filed within two years of A's filing date he should be treated the same as B.

Add to the above a change in the term of a patent to make it run 19 years from the date of application instead of 17 years from date of issue and the following beneficial effects should result:

(1) The money now expended in trying interference cases will support at least two additional examining divisions, which will greatly aid in securing prompt examination of applications and issuance of patents.

(2) The various divisions and tribunals of the Patent Office will be able to devote practically all of their time to the treatment of applications for patents which should be the sole concern of the Office.

(3) Applicants and their attorneys will reply promptly to official letters which will greatly facilitate the work of the Examiners, this because delay in replying will be chargeable against the effective terms of the patents.

(4) It goes without saying that expeditious disposition of applications in the Patent Office will greatly benefit inventors, manufacturers and the public generally.

(5) Inventors will not be compelled to litigate the question of priority of invention before they have an opportunity to ascertain if their common invention is commercially valuable or worth fighting over.

(6) Interfering patentees will not go into the courts unless their common invention has proven worthwhile and, naturally, in many cases they will settle their differences out of court and without expense.

(7) In case of failure to agree, interfering patentees will be able to settle their difficulties in one trial and with one appeal, whereas now they are confronted with one trial and three appeals, with numerous side line motions and petitions, and in the end a decision which is not final.

(8) The public and manufacturers will not be kept in suspense for years while inventors litigate in secret in the Patent Office over inventions which are public use, perhaps marked "Patent Pending." The public has a right to know.

Early Information on the Institute's Study of the President's Commission Report

JOHN C. GREEN*

BACKGROUND

SINCE ITS INCEPTION The Patent, Trademark, and Copyright Research Institute has directed much of its attention and resources to examining the role of the patent system in our society. Therefore the *Report of the President's Commission on the Patent System* was of particular interest, since that body presented a series of proposals which would result in several significant changes in the present practice.

These changes were intended to accomplish the following objectives:

- (1) To raise the quality and reliability of the U. S. patent;
- (2) To shorten the period of pendency of a patent application from filing to final disposition by the Patent Office;
- (3) To accelerate the public disclosure of technological advances;
- (4) To reduce the expense of obtaining and litigating a patent;

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- (5) To make U. S. patent practice more compatible with that of other major countries, wherever consistent with the objectives of the U. S. patent system;
- (6) To prepare the patent system to cope with the exploding technology foreseeable in the decades ahead.

These are important and valid. However it seemed to the Institute's advisers and staff that any substantial changes contemplated in the U.S. patent system should include another and broader objective. This is—"To increase incentives to innovation in our society."

Successful innovation contributes to a growing economy, to increased employment, to higher living standards, and to the satisfaction of consumer wants. These are major goals for American society today and in the years ahead. Hence, it seemed useful to examine the Commission's proposals to determine if their acceptance would in fact, encourage, discourage, or otherwise affect the work of innovators and the process of innovation.

The first and obvious task was to review its own research, which extends for more than a decade, to extract relevant facts, and to supplement this effort by pertinent information in the literature. A part of this literature, which has grown constantly since the Commission's *Report* was released, covers the views of the patent profession and national associations representing sections of industry. It soon appeared that these expressions, while articulate and persuasive, did not reflect the needs and reactions of all those who influence innovation.

At this point it may be useful to define terms. "Innovator" as used in the Institute's project comprehends all persons who play a significant role in carrying a new idea forward from conception to commercial realization. Thus, innovators in our society include inventors, assignees of patents, patent attorneys, research administrators, production engineers, and company executives.

Another way of illustrating this "enlarged" look at the persons concerned with the operation of the patent system is:

- (1) Those who make inventions—inventors;
- (2) Those who develop inventions—research administrators;
- (3) Those who produce inventions—production engineers;
- (4) Those who protect inventions—patent attorneys;
- (5) Those who finance inventions—company executives.

The Institute staff felt that the needs and knowledge of category 4, patent attorneys, had been well developed. Therefore it was

decided to concentrate resources on categories 1,2,3 & 5. When this plan was discussed with the Advisory Council, its Chairman, Mr. Earl Stevenson, observed that the role the patent system plays in our society is not limited to private industry. In this connection he urged examination of the interests and requirements of universities, research institutes, and the government itself. Accordingly it was decided to encompass these elements of our society in the project.

Also since many of the Commission's recommendations were directed toward moving our patent system in the direction of those found in other countries, notably western Europe, it was felt that a special effort should be made to encompass experience abroad. Thus, productive exchanges of information with persons knowledgeable about the operation of other patent systems became a part of the project, as did examination of the views of foreign inventors who have taken out U.S. patents. It was thought that this particular type of experience would shed light on features of foreign systems which, the Commission felt, merited adoption:

At this time it became clear that a research project of much larger proportions was needed. Accordingly the Institute's Director, Prof. L. James Harris, called together his investigators and organized them into a "team" with each member assigned to collect facts from one of the categories and relating these facts to a central analysis. This might be thought of as a "systems" approach in which the system comprehends all those in government, academic institutions, and private industry with a significant stake in the patent system. The writer, who serves as project leader, has prepared this "progress report" to inform interested parties of what already has been done and what lies ahead.

ACKNOWLEDGEMENTS

At this point it should be noted that the Institute's endeavor could not be accomplished in a reasonable time without the splendid cooperation received from such organizations as the U.S. Patent Office, the American Society of Tool & Machinery Engineers, the Electronics Industries Association, the Industrial Research Institute, the Research Corporation of America, the Association of American Universities, and many others.

THE APPROACH TO THE STUDY

The next step was to outline the methods which the investigators would follow. It was not found necessary to design any unique research

scheme. On the contrary, it was felt that the normal process of conducting research which is a combination of: (1) study of the literature, (2) assembly of responses to appropriate questionnaires, (3) development of case histories, and (4) the conduct of special interviews, would produce new and useful information which could be analyzed and reported on by the research staff.

Two more steps were required before practical work could begin. These were: (1) a selection of significant issues to be examined, and (2) the development of a suitable roster, or "universe," of experienced persons to be approached. The first was quickly accomplished. It was recognized that many of the Commission's proposals were logical modifications of current practices which could be adopted easily, and whose advantages were obvious. Therefore, it was felt that the Institute should concentrate its attention on those recommendations whose net impact if adopted would be to alter significantly, major features of our traditional patent system. Among the proposals which the Institute is examining are:

- (I) First to file. This change would call for abolition of grace period and interferences. In addition foreign knowledge, use, and sale, would be included as prior art.
- (II) Introduction of preliminary applications as a substitute for the present grace period.
- (V) Authorization of either the inventor or the assignee to file and sign the patent application.
- (VII) Arrangement for publishing of a pending application 18 to 24 months after its earliest effective filing date.
- (XI) Provision for a citation period before the patent issues during which the public could submit relevant patents or publications.
- (XV) Introduction of a provision whereby private parties can seek the cancellation of issued patents.
- (XVII) Creation of an interim liability for infringement of a claim prior to issuance of a patent.
- (XVIII) Measurement of the term of a patent for a period of 20 years from its earliest U. S. filing date.
- (XXXIII) Undertaking of a series of measures directed to the
- (XXXIV) promotion of a universal patent system.
- (XXXV)

The problem of finding competence and experience in the several categories of interest was not simple. Here it should be noted that

we were not seeking to obtain ideas and opinions of a random sample or of some statistically valid cross-section of the American community. On the contrary, we were seeking to reach enough persons with an understanding of the patent system to indicate how the significant changes proposed might encourage or discourage the introduction of new ideas. In other words, how would inventors, research executives, management personnel, et cetera, conduct their affairs differently if any or all of the recommendations were enacted.

Perhaps one of the most difficult tasks faced by the staff was to make certain that the questionnaire and interviews were designed in a completely objective and impartial fashion, since to do otherwise would bias the results. It was found that a faithful reproduction of the Commission's recommendations together with relevant explanations was adequate when dealing with competent inventors and patentees. However, the approach to company executives recognized that they had less specific information on the operations of the patent system. Therefore, a distinctly different questionnaire had to be drafted. Here objectivity was preserved by defining the several situations and giving the company officials the opportunity to make positive or negative replies. Supplementing these replies by additional information was at the option of the respondents. The foreign inventor was an especially difficult problem, since we wished to find out the motivation that made him seek patent protection in the United States, plus his views with respect to the special advantages or disadvantages of the U.S. patent system as compared with his own. This required a third and distinctly different questionnaire, but one related to the basic issues raised by the Commission. Ultimately it was necessary to design a specific questionnaire for each category of innovator to be approached.

In all cases the Institute was careful to avoid asking such a question as—"How do you like this recommendation?" It was felt that this approach would lead to an "opinion" answer, or might bias the reply of the person interrogated. Instead the approach was to inquire first "What have you done heretofore?" Then, "What would you do differently if this proposal were to be adopted?" These questions limited the answers to an explanation of specific actions which might be altered either positively or negatively. No questioning technique can avoid some flavor of "opinion" in the response. Moreover, this is acceptable since a man's opinion usually influences his actions. However, the effort here has been to seek for an open-minded and objective study based on factual information supplied by persons with extensive experience.

One of the most productive devices for acquiring factual informa-

tion was to ask for a description of an invention which has been made in the reasonably near past and carried forward successfully from testing, development, experimental production, and marketing, to full production, under the patent system as we know it today. Then the expert, who had identified this inventive history, was asked to simulate the specific steps he had described as they might be changed by each of the Commission's principal recommendations. The insights which were provided by this "family" of case histories have been most useful.

As the work progressed, it was recognized that other recommendations offered by the Commission were of major significance. However, it was doubted that the several categories of innovators involved in the Institute's study had enough related experience to produce new and useful facts. Such additional topics were:

- (1) Recommendation IV, Section 3, which suggests that computer programs should not be considered patentable.
- (2) Recommendation XXIII, which states that a final federal judicial determination declaring a patent claim invalid shall be *in rem*.
- (3) That element of Recommendation I which abolishes interference practice.

It seemed that these matters could be handled by the preparation of specific studies, and the help of men with related experience was enlisted to examine and report on these subjects.

THE CURRENT SITUATION

Three questions are of immediate interest:

- (1) What has happened since the Commission submitted its *Report*?
- (2) What are the Institute findings?
- (3) What is the Institute producing and for whom?

With respect to the first question—a great deal is happening. First the Administration moved quickly to accept the Commission's recommendations and to translate them into proposed legislation. This was presented to the Congress, and strong arguments were offered for prompt passage. This led to wide public discussion, led by the Patent Bar, and to the draft of alternative legislation which differed in major respects from the Administration-sponsored bills.

Recently hearings were held in the House and Senate where an

evolution in many of the Administration's positions was presented. Specifically, officials of the U.S. Department of Commerce, speaking for the Executive Branch, presented new approaches to most of the controversial recommendations. The relationship between these new approaches and some of the facts being gathered by the Institute will now be discussed. It should be stated clearly and emphatically that the comments which follow are based on information received and analyzed to date, March 5, 1968. Additional responses, which are being received daily, will shed additional light on the propositions advanced by the Commission and the changes suggested by the Commissioner a few days ago.

FIRST TO FILE

Commissioner Brenner, in a statement to Subcommittee No. 3 of the House Judiciary Committee, on February 28, 1968, said that the Administration now favors a system which contemplates issuance of the patent to the first man to file, *but* affords a junior party who filed competing claims the opportunity to request an interference, if his filing date is within one year of that of the senior party. The Commissioner suggested to the Congress that:

A party to an interference proceeding would be permitted to prove all earlier dates, but could only obtain the benefit of a date of invention no earlier than one year prior to his earliest public act or earliest filing date.

Thus it seems that the Administration now favors retention of the concept of "first to invent," while saying that, as a matter of simplified office practice "we will issue the patent to the first man to file but give a junior party an opportunity to show us we were wrong."

Now what information has the project uncovered which sheds light on both the original and the new suggestions advanced by the Commissioner? Facts collected from inventors, research administrators, and company executives are consistent with respect to "first to file." Most respondents in each category identified negative effects on innovation if this recommendation were to be enacted into law.

As observed earlier each innovator questioned, was asked to identify how he would behave differently, if the Commission's proposals were adopted. With respect to "first to file," many said they would be forced to file numerous, ill-prepared applications. Also fears were expressed concerning a continuing "race" to the Patent Office to avoid loss of legitimate rights. Further, some thought that patents when obtained

would not properly describe the invention, nor provide the desired protection.

Also significant were the statements by innovators that they would be put to greater costs and increased paper work. Many indicated that such "discouragements" would slow down their innovative efforts and/or would move them to rely on trade secrets instead of open disclosure through the patent system.

It should be noted that these comments differ from those of a representative of a small business association who reported to the Senate Subcommittee at a recent hearing that small business welcomed the "first-to-file" provision.

The Commissioner noted that if the modified system now recommended, is ultimately adopted, the Administration would favor retention of the one-year grace period. Such a time, during which the inventor and those associated with him could arrive at a better understanding of the principles, scope, and value of the invention, was deemed vital by the experts canvassed.

A representative of a major firm, commenting on the value of the grace period, observed.

... in our experience over the years there have been in the aggregate several hundred situations in which the existence of a so-called "personal grace period" has made it possible to obtain patent protection which would otherwise have been lost. Such situations have involved a very small percentage of our inventions, and of course not all of them were of great value, but it does seem to be a basic rule of human experience that ill luck is more apt to attack the important than the unimportant, and inventions are no exception.

The Commissioner advised the Congress that the feature of the "new approach" which permits a party to an interference to obtain the benefit of a date of invention no earlier than one year prior to his earliest public act, or earliest effective filing date, "will encourage early publication and use of new technology." It will be necessary to reexamine the information collected on publication 18 to 24 months after filing and publication practices in general before we can comment on this belief. However it is clear that retention of the right to prove priority of invention is important to innovators.

It should be noted that the Administration now proposes to permit *proof* of "all earlier dates," but limits the benefit of a date of invention to one year prior to the earliest public act or effective filing date. Evidence acquired by the Institute indicates that this limitation may be too rigid. Representatives of the chemical and pharmaceutical industries in particular have pointed out numerous examples in which

the time elapsing between conception and a practical process or product, for which suitable patent protection could be obtained, called for several years of diligent effort and large expenditures of money. This situation, while more pronounced in the chemical and pharmaceutical industries, is not unique to them.

Originally the Administration urged that "world wide prior art" be cited against applications for patent. However, the statement offered recently by the Commissioner stated that "it is premature at the present time to incorporate this standard into the laws of the country." This change in view coincides with the information collected. While some respondents looked favorably on the original measure, many thought it was an impractical idea. Others noted the difficulties and costs that independent inventors and small firms would face if world-wide searches would have to be made before the preparation of U.S. applications. In summary, several saw it as an additional deterrent to successful innovative activity.

PRELIMINARY APPLICATIONS

Recommendation II by the Commission suggested the addition of preliminary applications to provide a filing date for features disclosed. If adopted such a device would be used since it would provide some remedy for the abolition of the grace period. Nevertheless, its introduction would raise serious questions in the minds of innovators. The major doubts as to the value of such a plan might be summarized as follows.

Preliminary applications would mean more work for patent attorneys and the Patent Office. Innovators wouldn't know the degree of protection provided until judicial proceedings some time in the future. Little would be saved since full, careful disclosure must be made to support a later complete application.

The present Administration view is to drop the preliminary application concept. However it should be noted that the suggestion is made that the rules might be liberalized to permit the filing of an application without claims, formal patent drawings, and the full examination fee. This thought would seem attractive to private inventors who have complained of the costs of preparation and filing of patent applications. However some of the observations noted with respect to preliminary applications may be pertinent to this mechanism.

COMPUTER PROGRAMS

The Commission has recommended that a section excluding computer programs from patentable subject matter should be in proposed legislation. This was a topic about which a small percentage of the respondents felt competent to comment. However most of those who responded saw no reason why some form of protection could not be achieved. As noted earlier, the Institute is pursuing this problem, and its findings will be reported in the future.

PERMITTING ASSIGNEE TO FILE

The President's Commission urged that the owners of inventions, as well as inventors themselves, should be permitted to file patent applications. The original legislation included this recommendation, and the Administration still favors it. The Institute's investigations do not shed any particular light on the value of this proposal. It might be said that the few firms that have experienced difficulty in locating inventors express disinterest, and the larger number of respondents don't see it as an important problem. A few inventors were suspicious, fearing it might lead to loss of their inventions. However, most seemed to accept the idea without much concern.

EARLY PUBLICATION

The Commission recommended, and the Administration originally agreed, that applications regardless of the state of their prosecution should be published within 18 to 24 months of their earliest filing date. Currently the Administration would limit the application of the "early publication" idea to interferences and appeals where the time between the filing date and the issue of the patent is prolonged. This proposal, if enacted, would change the practices of many innovators. Many see early publication, in its original form, as a device to reveal their plans to competitors before they have acquired protection. To avoid this a good percentage indicated that they would place increasing reliance on keeping inventions confidential. Separately, a number of firms saw early publication as a device for finding out what their competition was doing and indicated they would search such publications with this objective in mind. From the positive point of view, several respondents said that they would have more careful searches made before filing. The limitation of early publication to interfer-

ences and appeals is believed to be more acceptable than the original proposal.

OPPOSITION AND CANCELLATION

When he appeared before the House Subcommittee, the Commissioner suggested that oppositions, limited interferences, and cancellation proceedings might be consolidated into a re-examination chapter. He then said that the Administration still favored cancellation and "would strongly oppose a shorter period than one year after the patent issued."

Innovators cooperating with the Institute had mingled views on the effects on their operations resulting from *opposition* before the patent issued. Some believed it would increase the quality of patents granted. However, their attitude about *cancellation* proceedings, after the patent has been granted, was more negative. A number of companies viewed cancellation as extending the period of uncertainty and thus slowing commercial introduction. Small firms and inventors saw this concept as a deterrent to seeking patent protection. Some indicated that they'd employ special licensing agreements to cover the period while cancellation was still possible. A few firms observed that they would not take advantage of either opposition or cancellation proceedings. They thought it would be more prudent to let the patents issue unopposed and to reserve any special information they might possess for use in case they were involved in legal proceedings relating to the patent.

It is recognized that the Administration proposes to reduce the time when cancellation proceedings are possible from three to one year after the patent issues. This might reduce the adverse influence of such an introduction, but would not change the negative reaction of most innovators.

INTERIM LIABILITY

The Commission's *Report*, and H. R. 5942, recommended that a patentee whose claims were infringed during the interim period between publication of the application and the issuance of the patent be given some protection. Later legislation (H.R. 13951) also provided for interim liability under different procedural requirements. The Administration currently prefers the language of H.R.

13951. This is a proposal which many innovators thought might be useful. The changes in procedure between the two bills would not seem to affect their future actions significantly.

TWENTY-YEAR TERM

The "twenty-year" patent can be disposed of quickly. It was recommended by the Commission, is found in pertinent legislation, and is still desired by the Administration. Innovators are "lukewarm" about it. In general they don't see it as a substantial incentive or deterrent.

INTERNATIONAL ACTIONS

These, of course, are "keystones" of the Commission's recommendations. For example, the controversial "first-to-file" system was urged as one step which would bring the U.S. system more in harmony with those abroad.

In considering moves toward a universal patent, innovators made an interesting distinction. While they favored a plan which would make it cheaper and easier to get patents in other countries, they saw great disadvantages in unilateral changes in the U.S. patent system which might weaken its value as an incentive to innovation within the United States. A strongly expressed comment from a medium-sized firm sums up this reaction:

. . . the United States is the largest and the most highly industrialized market in the world, and I see absolutely no reason why we should modify our patent methods to become "harmonious" with the rest of the world. In my opinion, the only worthwhile patent systems in the world outside of our own are those of England, Germany, and Sweden. The rest are practically a rubber stamp process, and without debating the effects on how they got into this kind of a situation, I would think that a comparison of our industrial progress with these other countries would make it obvious that our patent system has something which the others do not have.

The Administration is taking a realistic point of view on this basic recommendation. While they feel that the groundwork for an international patent system must be laid, they recognize that U.S. interests are paramount. Perhaps the single area of international study and effort which innovators would find productive would be an examination of a single, high-quality search system which could be accepted by a number of patent offices. In this connection it is worth noting that

only a handful of countries today have a search system that innovators feel approaches that of the U. S. patent system.

LOOKING AHEAD

At this point one might ask what has caused the change in the Administration's viewpoint in the ten months which have elapsed between the early and the recent hearings? First, and importantly, is the knowledge acquired about the problems and pitfalls inherent in some of the more sweeping propositions advanced by the Commission.

Also significant is the role of Dr. John Kincaid, Assistant Secretary of Science and Technology in the U.S. Department of Commerce. Dr. Kincaid came to government from industry less than a year ago. He is a successful inventor who has taken out important patents. Also he had been vice president for research of a major chemical company. Without doubt his broad experience has been a constructive factor in enabling the many federal agencies to reach the new positions described.

Dr. Kincaid has called on the Institute, urging that the factual information which is being collected be made available to the government as early as possible. This request has been accepted, and members of the professional staff are furnishing the U.S. Patent Office with pertinent findings with suitable preservation of the anonymity of respondents. In addition, the results of studies of general interest will be released in future issues of *IDEA* and at the Annual Conference in June. Prof. L. J. Harris' article in the Fall 1967, issue of *IDEA*, titled "Notes on European Opinion Regarding Industrial Property—Summer 1967," and this progress report are the first two items in the series.

Economic Aspects of Trademark Utilization

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SUMMARY

THIS IS THE THIRD REPORT on a continuing study of trademark use, management practice, and economic significance being conducted in this Institute. The primary object, as in all Institute projects, is to build a firm factual base for intelligent public consideration of the unresolved issues in this field. Initially a test questionnaire was sent to a limited number of leading U. S. manufacturing firms. Based on the findings from this first approach, a second questionnaire was developed and sent to a broader sample of manufacturing firms. This particular article details the researchers' findings and analyses from the returns of the later questionnaire, supplemented by the earlier one.

While manufacturers of consumer products may be the more widespread users of trademarks, producers of industrial goods, particularly the more affluent ones, are also highly trademark conscious, primarily for image-building purposes. The direct correlation

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between size of company and expenditures for trademark acquisition and maintenance prevails with respect to foreign, as well as domestic operations of U. S. manufacturers. It is difficult for most respondents to assign a specific value to their trademarks, but they generally consider them among their most valuable assets. In some cases, formulae were provided for calculating specific trademark values. Problem areas regarding possible deficiencies in U. S. trademark law centered primarily on the law's rigid first-user requirements and U. S. lack of use of the international classification system. Difficulty in enforcing "prior user" rights was generally the main problem abroad but the rigidities of certain Western European laws, such as that in the U. K. with regard to non-registrability of geographic-type marks and those in Scandinavia regarding surnames, were particularly troublesome.

INTRODUCTION

THIS REPORT IS BASED primarily on material obtained in mail questionnaire returns from a sample of manufacturing corporations, both large and small. Questions asked dealt with trademark selection, geographic extent of registration, practices concerning trademark maintenance, amount and techniques of trademark promotion, and resulting good will values of trademarks to their owners as intangible business assets.

It should be noted at the outset that, even though the questions asked were moderately difficult and required judgments of a kind not regularly sought, the returns do exhibit a consistency of response and a definite pattern of corporate practice which we believe makes them reasonably typical of a larger universe than our sample of completed returns. Material drawn from any sample obviously leads to errors of estimate. Our concern, however, in the present study is less with magnitudes than with contours of customary practice. In this latter area we have obtained what we consider a workable consensus on corporate trademark policy but do not claim precision for the statistical results as estimates of the universe from which the sample was drawn. Indeed we doubt that precision in this field is attainable.

Although two separate questionnaires have been circulated to different samples of respondents, the results in certain cases are comparable and have been cumulated when appropriate. Our second

questionnaire was more detailed and searching than our first; it is appended to this report.

DESCRIPTION OF THE SURVEY AND THE RESPONSES

Initially, in order to determine the most practical approach to this set of corporate trademark problems, the Institute sent a test questionnaire to a selected cross-section of manufacturing firms; its primary purpose was less to acquire substantive information, as such, than to determine what changes and refinements would be most desirable for developing an optimum questionnaire that would elicit the type of information in depth that was needed. This "test" approach proved to be quite effective—not only in enabling the research team to develop a more meaningful questionnaire for the broader scale survey but also in providing highly useful substantive information on the trademark practices of leading and larger sized manufacturing firms. The results obtained from the test questionnaire are described in the Fall 1966 issue of *IDEA*.¹

The second questionnaire, developed on the basis of experience gained in the earlier approach, was sent to approximately 350 selected U. S. manufacturing firms, ranging in size from those with annual sales of about \$1 million to those with \$1 billion or more in annual sales. This article details our analyses and conclusions derived primarily from data acquired by this second questionnaire, as underpinned by the earlier one.

The Institute's second questionnaire sent to manufacturing firms consisted of four basic parts (see Appendix). The first part asked essentially for statistical data on the number of trademarks the firm owns and uses (including house, product and service marks) and also on how many marks it has registered abroad as well as in the United States. In addition, information was sought on the number of marks it uses abroad, but not in the U. S., and on how many foreign registrations the firm had normally acquired for each mark it had registered in the U. S.² The firm was also asked about the more

¹ "The Economic Role of Trademarks and Their Utilization as Business Assets" by authors of this article, *IDEA*, Vol. 10, No. 3 (Fall 1966), pp. 323-326.

² Because of language differences and cultural variations, some marks are clearly less appropriate in foreign countries than new marks especially selected for that purpose. Adaptability to foreign use is now often an important factor in trademark selections; but many established house and product marks were picked before export sales were significant and therefore before foreign use became an important consideration.

important considerations that went into its decisions whether or not to register particular marks abroad.

The second part of the questionnaire asked for data on how the firm went about selecting and promoting its trademarks. We sought in this part to obtain representative case histories of particular marks that had contributed in some important way to the growth or current market position of the company.

In the questionnaire's third part, information was sought on the firm's experiences and principal difficulties in protecting its trademark rights. Its reactions to major problems encountered because of possible deficiencies in U. S. trademark law were also sought, as were its suggestions for any further Institute research in the trademark field that might be fruitful.

The fourth and last part of the questionnaire asked for data on the firm's trademark licensing and sales operations, including descriptions of salient provisions generally included in its licensing agreements, and whether it had bought and sold groups of assets over the past five years that included trademarks.

Two appendices were included—one designed to obtain specific information on trademark maintenance costs and the other to obtain a quantitative measurement by the firm (in dollars) of the economic value of its trademarks that are used to identify goods and services.

We had hoped to receive a more widespread response from the recipients of the second questionnaire (as well as the test questionnaire). The return rate was 13 to 14 percent (47 out of about 350 in the second survey; and 26 out of about 190 in the test questionnaire). Nevertheless, when compared with the experiences of other organizations undertaking research relative to trademark usage, the Institute's results were considered satisfactory.³

We had a fairly good response rate (30 percent) from the 50 manufacturing firms with annual sales of \$1 billion or more that

³ For example—Mrs. Ginny M. Dell of Foote, Cone and Belding, Inc., a New York City advertising agency, speaking at a U. S. Trademark Association seminar March 23, 1967, on "Trademark Problems in Acquisitions and Mergers," noted that in a survey on trademark advertising in television conducted in late 1965, "the Trademark Association sent out over 300 questionnaires to corporate trademark owners, most of them members of USTA. There was a 10% return. Why only 10%? Were 90% too busy merging and searching and defending to reply? Eight other recipients claimed no use of TV, insufficient use, or claimed 'no experience.' Does this mean 'we have had no experience with a regular monitoring system? No experience with trademark misuses? No experience in regularly checking for proper trademark use?' Over 17 billion dollars was spent in advertising in 1966. Over 2.2 billion of that was in television. That's a large chunk of American dollars to have 'no experience' in."

account for about 30 percent of total sales and 35 percent of assets of the approximately 300,000 manufacturing firms in this country. Our response rate was a little less favorable from the so-called medium sized firms, i.e., those with annual sales between \$100 million and \$1 billion. There are about 380 such firms in the U. S.; they account for 29 percent of total sales and 31 percent of manufacturing assets of all 300,000 U. S. firms. We sent questionnaires to 75 of these medium sized firms and received responses from 20.

The research team believes that it has a good sampling base, insofar as major U. S. manufacturers and trademark users are concerned. Industrial as well as consumer goods producers are represented, as are those U. S. manufacturers who are considered to be major multinational firms and exporters.

The earlier test questionnaire did not produce as much substantive data as the researchers would have desired on smaller sized firms, i.e., those with annual sales under \$100 million. Nevertheless, as previously noted, this was not its principal intention. That questionnaire's main purpose—in providing the basis for developing a more meaningful final approach—was reasonably well served with regard to the smaller companies. Our second questionnaire, retailored for more feasible responses by these firms, brought forth responses from enough of them with sufficient data to enable us to obtain some excellent insights into their trademark practices.

TRADEMARK OWNERSHIP AND USAGE EVALUATIONS

As indicated in Table 1, 47 manufacturing firms responded to our second questionnaire. Together with the 26 firms that had replied to the earlier inquiry, these 73 firms constitute our overall survey base.

Data received on the trademarks owned and used by these firms at home and abroad indicate that the firm's size plays a major and perhaps dominant role in the expansion of its trademark portfolio. We are not questioning the fact that manufacturers of consumer products are the more widespread users of trademarks for marketing purposes. We do note, however, on the basis of the respondents' replies, that the more affluent producers of industrial goods (as distinct from consumer goods) attached no lesser importance to their trademark activities than did the consumer goods producers. All recognized the need for effective trademarking, and, if they could afford it, they trademarked. The smaller sized respondents, most of whom were consumer goods producers, simply could not afford an extensive trademark program, either in the U. S. or abroad.

There are many variables that influence a company's decision on how much of its resources should be devoted to trademark activity. Close scrutiny and analysis of the respondents' marketing status, as well as the answers to their questionnaires, indicate that an important element in the larger firm's trademark program is the desire to make itself better known—to achieve more recognition by the general public both at home and abroad. In other words, the firm's motive goes beyond the mere purpose of using a trademark as the focal point around which to establish or expand a marketing program. Thus, many of the larger respondent companies tied their trademark portfolios into extensive educational campaigns to achieve as wide an exposure as possible. The industrial goods producers, particularly, were interested in informing the public that well-known consumer products bore their branded components or were made with their branded machinery. Also, as certain industrial producers expanded into, merged with, or otherwise acquired consumer goods manufacturing interests, it became important for them firmly to establish their public image within these new contexts.

There was little correlation between the number of new marks which the major firms registered in 1965 and 1966 and their role as industrial or consumer goods producers. In our sample, 13 firms with annual sales over \$100 million reported registrations of 76 new U. S. trademarks in 1965 and 53 in 1966. Most of these firms were manufacturers of products such as nonferrous metals; glass; paper; lumber and chemicals; petroleum products; rubber products; and food and animal feeds. Another 13 respondents, each with annual sales of less than \$100 million, registered 38 new trademarks in 1965 and 35 in 1966. Most of these smaller firms were consumer goods manufacturers, although there were a few marks registered by makers of aero-space equipment, metal alloys and industrial fabrics.

COMPARISON DATA

In the second questionnaire, the eight respondents in the \$1 billion and above annual sales category accounted for about 37 percent of the total of 2,132 trademarks used by all 47 respondents (see Table 1). In the earlier test questionnaire, seven respondents in this largest category had accounted for about 61 percent of the marks used. These 15 manufacturing firms with annual sales of over \$1 billion therefore accounted for about 50 percent of the total of 4,841 trademarks used by the 73 firms in our sample.

In the earlier survey, the questionnaire did not ask for a classifica-

TABLE 1
NUMBER OF TRADEMARKS USED AND REGISTERED BY RESPONDENTS TO SECOND QUESTIONNAIRE

Annual Sales Category (\$ million)	No. Firms	No. of Trade- marks Used in U.S.	House Marks			Product Marks			Service Marks		
			Total	Prin. Reg.	Supp. Reg.	Total	Prin. Reg.	Supp. Reg.	Total	Prin. Reg.	Supp. Reg.
Over \$1,000	8	767	10	10	0	733	690	14	24	22	0
\$500-999	7	563	24	24	0	527	509	11	12	11	0
\$250-499	2	180	0	0	0	180	180	0	0	0	0
\$100-249	2	39	2	2	0	36	31	1	1	1	0
\$75-99	2	38	8	8	4 ^a	30	20	12 ^b	0	0	0
\$50-74	4	51	4	3	0	47	46	1	0	0	0
\$25-49	9	379	10	10	0	368	366	10 ^c	1	1	0
\$1-24	13	115	17	15	0	97	74	1	1	1	0
Total	47	2132	75			2018			39		

^a These four marks reportedly not now being used by the respondents.

^b Ibid (in case of 2 marks).

^c Ibid (in case of 8 marks).

tion of the types of marks used and registered (i.e., house, product, or service). The later questionnaire, however, did ask for this breakdown and for certain other details on registrations abroad; the results appear in Table 1.⁴ All the house marks owned by the eight "billion dollar" firms in the U. S., which are perhaps among the most important and valuable intangible assets they have, were on the U.S. Principal Register. Most but not all of the product marks were also on that Register. These eight manufacturing firms had relatively few service marks, but most of the ones they had were also on the Principal Register.

In foreign markets, these eight "billion dollar" respondents to our second questionnaire registered abroad about 60 percent of their U.S.-used trademarks including virtually all of their house marks, about two-thirds of their total product marks, and a little less than one-half of their service marks.

The companies sampled were asked how many foreign registrations are generally acquired for each mark used and registered in the U. S. Most of the eight "billion dollar" respondents reported that they registered anywhere from 10 to 50 times abroad each of their marks registered in the U. S.; the range of their total foreign registrations extended from about 400 (in the case of a processed food company) to over 7000 (in the case of a chemical and rubber company).

These eight respondents had relatively few marks registered abroad (104) that were not first registered in this country. (See Table 2.) In our earlier questionnaire, the responses on marks registered abroad but not in the U. S. (reported by seven "billion dollar" firms) totaled 92.

We come now to the medium-sized firms, i.e., those with annual sales ranging from \$100 million to just under a billion dollars. In the second questionnaire, 11 out of the 47 respondents were in this category (see Table 1); in the earlier test questionnaire, they accounted for nine out of 26. Together, these 20 firms accounted for 28 percent of the total of 4841 marks used by all 73 firms in our survey base.

All of these medium-sized firms that responded to the second questionnaire had their house marks registered on the Principal Register. Seven firms in the upper sales range of this medium-size

⁴ In our view, the details provided by the eight firms, with regard to the relative importance and percentages of the types of marks they register and use in the U.S. and abroad, are projectable to the practices of the seven "billion dollar" firms that responded to the earlier test questionnaire.

category (i.e., \$500 million to \$1 billion) reported that practically all of their product and service marks were on the Principal Register. The two respondents in the middle range (i.e., \$250 and \$500 million) reported no use of house or service marks; all of their product marks appeared on the Principal Register. The two companies in the lower sales range (\$100-250 million) reported use of very few house and service marks, all of which were on the Principal Register (see Table 1).

In foreign markets, all of the above 11 firms had registered about a third of their U. S.-used trademarks as compared with about two-thirds for the larger firms. The percentages of U. S.-used product and service marks registered abroad by the 11 medium-ranged firms were also considerably lower than those for the \$1 billion and above sales categories.

Most of the seven firms in the \$500 million to \$1 billion sales range reported they acquired from one to seven foreign registrations for each mark they had registered in the U. S. Some firms had as few as 60 marks registered abroad while others had as many as 700. The two

TABLE 2
NUMBER OF TRADEMARKS USED AND REGISTERED ABROAD
BY RESPONDENTS TO SECOND QUESTIONNAIRE

Annual Sales Category (\$ million)	No. Firms	Marks Registered Abroad (Also Used in U.S.) ^a				Marks Registered Abroad (but Not Used in U.S.) ^b				For'n Reg's Per Mark
		Total	House	Prod.	Serv-ice	Total	House	Prod.	Serv-ice	
Over \$1,000	8	449	8	431	10	104	NA	NA	0	10-50
\$500-999	7	228	15	211	2	24	10	24	0	1-40
\$250-499	2	5	0	5	0	0	0	0	0	14-20
\$100-249	2	11	1	10	0	0	0	0	0	3
\$75-99	2	6	4	2	0	0	0	0	0	1
\$50-74	4	36	3	33	0	0	0	0	0	5-12
\$25-49	9	68	3	64	1	0	0	0	0	1-13
\$1-24	13	26	7	19	0	0	0	0	0	3-19
Total	47	829	41	775	13	128	(NA)	(NA)	0	

^a These figures are the number of foreign registered marks that are in the firms' U.S. portfolios. The aggregate of all marks used abroad by these firms is not shown. It would be obtained by determining the number of foreign registrations each firm obtained for each of its U.S. registered marks.

^b Not aggregate figures.

firms with annual sales of between \$250 and \$500 million reported 15 to 20 foreign registrations for each U. S.-registered mark—in one instance, a total of 400 marks, and in the other, of about 2300 marks owned abroad. In the lower sales range (\$100 to \$250 million), only one respondent reported foreign registrations; three for each used in the U. S., or about 100 abroad.

Together the 11 firms in the \$100 million to \$1 billion category had only 24 marks that they used abroad but not in the U. S. In the earlier test questionnaire, the nine respondents in this category reported a total of 10 such marks.

The last broad category in the present sample survey consisted of the smaller-sized firms with annual sales of less than \$100 million; 28 of the 47 respondents to the second questionnaire were in this category. In the test questionnaire, there were 10 such firms out of 26 total respondents. In the second questionnaire, the better rate of response and adaptability of the questions to the operations of these smaller firms enabled the Institute to acquire some excellent data on their trademark operations. The 28 firms replying to the second questionnaire accounted for about 28 percent of the 2132 trademarks in use in the U. S. by all 47 respondents (see Table 1). In the test questionnaire, 10 firms in this category had accounted for about one-fifth of the total of 2709 marks reported as used by all 26 respondents. In sum, these 38 smaller firms accounted for about 21 percent of the total of 4841 marks used in the U. S. by the 73 respondents in our survey. Thus, while these smaller firms made up over half of the number of respondents in the survey, they accounted for less than one-fourth of the total marks which all respondents used.

In foreign markets the 28 smaller firm respondents to the second questionnaire had registered abroad about one-fourth of the marks they used in the U. S. (see Table 2). Three of six respondents with annual sales between \$50 and \$100 million reported they registered each of their U. S. marks from five to 12 times abroad—with total ownership of from about 80 to 125 foreign marks. Five of the nine respondents in the \$25 to \$50 million sales category reported registrations of U. S. marks from one to 13 times abroad—with total foreign ownership ranging from 400 to 900 marks abroad. Of the 13 respondents in the \$1 to \$25 million annual sales categories, three reported ownership of foreign marks. None of the 28 respondents with sales of less than \$100 million reported that they registered and used marks abroad that were not used in the U. S.

Responses by the 47 firms that answered the second questionnaire were generally similar regarding their considerations in deciding whether or not to register abroad. Various firms indicated that their foreign trademark programs were governed, among other things, by the type of overall advertising and publicity campaigns they decided to undertake abroad. Regarding particular trademarks to be registered abroad, many respondents noted that foreign registrations were determined by probability of use of a mark, based on types of goods involved coupled with extent of sales contemplated. Actual levels of business done and market surveys conducted in countries served as decisive factors in determining whether or not to register a particular mark. Many companies also noted, in addition to the sales potential of particular markets, that defensive protection of their marks against piracy in various countries was a highly important consideration.

Peculiarities of registration requirements in foreign trademark laws were also governing factors. Various firms noted that the existence of subsidiary or other affiliated facilities and of licensing arrangements with these and other entities were important further considerations in developing foreign trademark programs. A number of firms particularly wanted to see that the good will of their products and the reputation of their licensees were fully protected abroad through proper registration and maintenance of their marks.

The geographic registrations of those of the 47 respondents to the second questionnaire who registered abroad were comparable to the foreign registration pattern of those 26 firms that had responded to the earlier test questionnaire. In our second questionnaire, all of the eight respondents in the \$1 billion and above sales category had some foreign registrations, generally on a worldwide basis, but, at the very least, in Western Europe, the British Commonwealth, Japan and about four or five Latin American countries.

In the \$100 million to \$1 billion sales category, nine out of 11 respondents had filed abroad, primarily in Western Europe and the British Commonwealth, and several also in Latin America and Asia. Out of the 13 respondents with annual sales between \$25 and \$100 million, eight had registered trademarks abroad, mostly in Western Europe and Canada. One firm in this category (a soft drink manufacturer) had registered its trademarks worldwide, while another had some registrations in Asia. Only three of the 13 respondents with annual sales of less than \$25 million had registered their trademarks abroad.

Recipients of the second questionnaire were also asked to provide

an approximate percentage that sales of their trademarked products have to total sales. The responses indicated that the rate of sales of trademarked products to total sales was progressively lower the smaller the company size category (in annual sales, see Table 3). It is nevertheless to be noted that among the larger manufacturers there were a few with trademarked product sales of less than 90 percent while at the lower part of the scale, there were some small manufacturers who sold 100 percent of their products under trademarks.

Of the eight respondents in the \$1 billion and above sales category, six specified that 100 percent of their sales consisted of products bearing their own trademarks. Of the other two, one firm, a petroleum and chemical producer, sold 93 percent of its products under trademarks; the other firm, an aircraft and electronics parts manufacturer, did not specify any percentage.

Only one of the seven respondents in the \$500 million to \$1 billion sales category (an electrical equipment manufacturer) reported that it sold all of its products under trademarks. Three of the firms—

TABLE 3
RESPONDENTS TO SECOND QUESTIONNAIRE—RATIO OF
PRODUCT SALES TO TOTAL SALES

Annual Sales Category (\$ million)	Total No. of Firms	Sub-Totals According to the Percent of Their Trademarked Product Sales to Total Sales						
		Percentages						
		100	90-99	70-89	50-69	25-49	Less Than 25	Not Spec- ified
Over \$1,000	8	6	1					1
\$500-999	7	1	2	2	1			1
\$250-499	2		1	1				
\$100-249	2		1				1	
\$75-99	2		1				1	
\$50-74	4			2	1			1
\$25-49	9	4	1	1		1		2
\$1-24	13	2	3	5	1		1	1
Total	47	13	10	11	3	1	3	6

producers of nonferrous metals and paper products—reported from 50 to 80 percent of their sales under trademarks. Two manufacturers reported about 90 percent of such sales. One firm did not specify any percentage.

The two respondents in the \$250 to \$500 million annual sales category noted that 75 to 90 percent of their sales consisted of trademarked products.

Of the two respondent firms with annual sales of \$100 to \$250 million—one, a bulk petroleum producer, noted that its sales of trademarked products were “minimal”; the other, a manufacturer of machinery and components, indicated that 90 percent of its sales consisted of trademarked products.

The percentage sales of trademarked products among the 28 respondents with annual sales of under \$100 million varied widely. Of these firms, six noted that 100 percent of their sales consisted of trademarked products; five others indicated that 90 to 95 percent of their sales consisted of such products; eight reported 70 to 85 percent; three reported 25 to 50 percent; two reported “minimal” sales of such products; and four did not specify.

TRADEMARK VALUES

Because of the intangible property aspect of a good trademark, most of the companies we surveyed could not assign a specific “book” value to a particular mark (house, product or service), but when asked by us to do so, the majority of those that did answer estimated this value to be “in the millions.” Where the public had gained confidence in a particular brand name, the mark’s value for future use and exploitation was considered by the owner to be great but indeterminable, even after years of use.

The case histories of a successful company’s “house mark” were all found to be basically the same. A mark was adopted in conjunction with the original operation of the company which may have constituted the marketing of a single product or a group of closely related ones. If the corporation expanded or diversified, the original mark in some instances assumed the role of “house mark” or of “primary product mark,” as various new corollary marks were developed and associated with it. In some cases the house mark became so well known that the company changed its lesser known trade name to a name embodying the trademark itself.

When asked to assign a value to a house or primary product mark

used for a long time and extensively advertised, typical replies included comments such as those from the following six companies:

Its specific value cannot be determined although it is considered one of the corporation's most valuable assets. Its image inspires confidence in the public and assurance to all of inherent quality in whatever product it occurs with. Through this continuous maintenance of quality in a variety of products, sales have continuously increased along with the product line and thereby corporate growth.

It is difficult to assign a value to this trademark which has contributed in a most significant way to making this particular brand of among one of the most widely known throughout the world. It has been a major factor in the growth of the parent company's subsidiary engaged in the manufacture and sale of I personally would estimate its value in the millions.

The corporate emblem is on all advertising and all products sold which lend themselves to a trademark. Because the corporate emblem has been synonymous with quality, we place a value of several millions on the mark.

It is difficult to assign a specific value to the mark but the sales of equipment symbolized by it have been in the millions annually for nearly 10 years.

As to the value of good will to be assigned to it, it would appear to be the value of our total sales.

One company reported that more than \$125 million had been spent in the direct promotion of its house mark through every available media.

We attempted to acquire some insight into the specific formulae used by the questionnaire recipients to establish a value for their trademarks. Few respondents provided any information on precise methods used to make such calculations. Nevertheless, we did acquire data sufficient to pinpoint some of the factors entering into the mathematical calculation of a trademark value. Two basic formulae were brought to our attention as "rules of thumb," with some variations, in valuing a trademark.

Formula No. 1—Take the yearly average net profit, for that part of a business using the trademark, over the past 10 years. Multiply that figure by a factor of 4 to 10 depending on management's consideration of the numerical degree to which it is a weak or strong mark, within this range of 4 to 10.

Formula No. 2—Estimate the annual sales loss of the particular business using a mark if the mark were to be discontinued. Multiply

that figure by net profit "per sales dollar" for that year for the business pertaining to the mark. Then, multiply the above result by the number of years management believes it would take to re-establish a new mark with a comparable sales reputation for that particular business.

TRADEMARK SELECTION

In the age-old controversy between advertising and legal experts regarding trademark selection and appearance, the advertising executives within the respondents' corporate complexes appeared to have won out in some cases, and the lawyers in others. The advertising element generally favors descriptive or suggestive type marks that are more easily integrated into advertising campaigns, while the legal staff generally favors coined or arbitrary marks which are easier to protect, although more difficult to associate with a firm or product. The respondent firms generally leaned toward marks consisting of shorthand designations tied to the corporate identity. Variations of the original mark selected for the introduction of the first product of a line were in many instances used for subsequent products.

Acronyms representing the initials of the company or an abbreviation of the corporate name were other common methods used in the selection of a mark. Fitting the mark into a family of marks already in existence, by employing a common prefix or suffix in all the marks, was a frequently used tie-in with the established corporate identity.

The actual selection pattern was comparable in the majority of instances. Most used was the so-called "committee system" wherein a mark is first selected by a group within the marketing and/or advertising department or an equivalent product-planning echelon. The selected mark was then referred to legal counsel for its opinion concerning registrability, and its technical qualification as a trademark.⁵ Some firms used computers to assist in trademark selection. Arbitrary selection of a trademark by the "boss' wife" or other party within, or affiliated with, top management, was not apparent among our respondents.

⁵ More detailed information on trademark selection is contained in our earlier report, "The Economic Role of Trademarks and Their Utilization As Business Assets," *IDEA*, Vol. 10, No. 3 (Fall 1966), pp. 323-336. Information received from respondents to the later questionnaire was not markedly different as to trademark selection procedures.

EXPERIENCE UNDER EXISTING TRADEMARK LAW

In Part III of our questionnaire, data regarding past experience under existing trademark law was sought. Investigation into this area was conducted in order to throw light on what weaknesses companies consider to exist in the United States and foreign trademark laws, and the economic consequences that have resulted from these weaknesses.

In the forefront of complaints with the United States statute was the uncertainty and lingering doubt still remaining in some cases after registration—doubt regarding the clear right to continue to use the registered mark after considerable promotion and investment in fixing the mark in consumer preferences.

Many companies reported that they selected a mark, then used, registered, and promoted it, only to find later that a prior “common law” user had superior rights in at least some geographic areas. The registrant was thereby not only precluded from trading in that geographical area, but the “common law” user was in a position to reap the benefit of the mark’s promotion at no expense to himself.

The common law relating to trademark usage and the Lanham Act, at least in Sections 33 (b) (5) and 33 (b) (6),⁶ recognize prior use as a defense in an infringement action. A basic problem area confronting a number of respondents is a question of conflicting equities. Recognizing that under equitable principles the rights of the first user should doubtless be respected and protected, they nevertheless questioned whether a second good faith adopter and registrant should, in effect, have his investment undermined, and also whether the first user should be able to reap a windfall from the promotional activities of the second user, under the present U. S. statute. These conflicting equities may be difficult to resolve.

About a fourth of the respondents indicated that there was a lack of comprehensive reference sources for definitive checking of used but unregistered trademarks, suggesting the strong possibility that a “common law” user might not be found until after an investment in a mark was already substantial.

As to possible solutions, a number of respondents suggested that “common-law rights” in a trademark should be cut off by registration, so that the registrant will be afforded a greater degree of protection than is now available to him. Those who recommend this change point out that adequate safeguards do exist in United States

⁶ Trademark Act of 1946, as amended (60 Stat. 427).

trademark law. Registration is tantamount to exclusivity after a stated number of years. In the interim, opposition or cancellation proceedings are available.

At the other end of the spectrum is protection of adopted names which have not been used, but whose promotion has begun or is about to begin after substantial investigation and expense has proved the mark to be registrable. Since trademark rights flow from use only, the need for some interim protection was expressed in a number of the replies received. Legislation is presently pending in the Senate, S. 1858, to rectify this situation. This bill, introduced by Senator Dirksen in May 1967 (and also in previous Congresses) states that an application for federal registration of a mark may be made even if the mark is not in use, provided that the goods in connection with which the mark is intended to be used are specified. However, no registration will issue until the applicant later files in the Patent Office a verified statement that the mark has been put in use in interstate commerce.⁷

Other firms expressed interest in writing "dilution" remedies into our present trademark statute; these would be designed to require definiteness in the description of goods covered by a trademark registration and to provide for amendment of existing trademark registrations to include additional goods.

The second questionnaire also asked the firms to indicate their major problem areas abroad because of possible deficiencies in trademark laws and other factors, including lack of uniformity in classification.

A number of firms were disturbed about the prior registration systems of many foreign laws where the first to register a mark is presumed to be the owner and where "prior user" rights are difficult to establish and enforce.⁸

⁷ A time limit is fixed for filing the required statement of use: any time after the application is filed, but not exceeding six months following publication of the mark. Failure to file this statement results in abandonment of the application. The mark is first published prior to examination, which is separate and apart from publication for opposition purposes after examination. This first publication date establishes priority for the adopted mark, unless prior to the initial publication someone else has commenced use of the mark or one confusingly similar thereto, or another has filed a previous application based on intended use which was followed by the required verified statement of use, or has acquired priority based on a foreign application.

⁸ The situation in France and Monaco was mentioned by several, where a few years ago a party had registered and acquired title to several hundred trademarks that were well known throughout the world as belonging to foreign firms. The Monacan and French governments insisted that such marks were obtained in ac-

Several respondents complained about the lack of general uniformity between U. S. and foreign trademark procedures. They indicated that it was difficult for them to cope with the differing classification systems between the U. S. and other countries, particularly in Western Europe.⁹ Some others complained about the problem of having to acquire separate trademark registrations in each country in which they were interested while certain of their foreign competitors could utilize the facilities of the Madrid International Trademark Registration Agreement to effect an "international registration," for two or more of the 21 member countries.

A few respondents were more specific with regard to particular problems in certain countries. The extreme difficulties of registering marks of a descriptive character in the U. K. were noted as were problems of registering surnames and combinations of letters in countries such as France and Norway.

LICENSING

A minority of the respondents to the second questionnaire—30 percent, had some active trademark licensing arrangements in 1966. The remaining 70 percent had no trademark licensing arrangements currently in force. Several other reporting companies had licensed trademarks in the past but had no active arrangements that year.

Among the companies with active licenses, licensing abroad was more common than licensing in the U. S. Four companies did report active licensing arrangements within the U. S., as compared with 14

cordance with legal procedures; that there were no grounds for their administrative cancellation; and that the only recourse for aggrieved parties was through the courts. Although the registrant later relinquished title to some of these marks, foreign owners of the others face costly, burdensome court litigation with dubious chances of success in efforts to seek relief.

⁹ There exists an "Arrangement of Nice Concerning the International Classification of Goods and Services to which Trade Marks Apply," signed June 15, 1957. This Arrangement, presently adhered to by 25 countries (21 in Europe and 4 in Middle East), was adopted so as to enable the member countries to establish a uniform classification system for registration of trademarks. Initially, the member countries used a list of classes that was developed and published in 1935 by United International Bureaux for the Protection of Intellectual Property (BIRPI), which administers the Nice Arrangement. Later, however, in 1963, BIRPI developed and published a new classification which is now used by the 25 member countries and about 35 others (mostly in Africa and the Middle East) that are not members. The 1963 list consists of 34 classes of goods and eight additional classes relating to services. The U. S. does not now use this classification system. The U. S. classification system consists of 52 product classes and eight service classes.

having such arrangements abroad. Typically, the foreign licenses involved several different marks and extended to a number of countries, in some cases 20 or 30.

The number of marks covered by licensing agreements was typically less than the company used itself; however, in most cases where licensing was active, more than one mark was licensed. Half the respondents licensed three or fewer marks and half licensed more than three—in one case 50.

Considerable variation was reported in the characteristics of licensing agreements but all these agreements had some common features. All licenses were strict on quality control, manner in which the mark could be displayed, right to inspect samples, and termination provisions. Agreements varied with respect to term, royalty provisions, possibility of sublicensing, and damages for violation. Three respondents merely described their licensing arrangements as "standard" (presumably for their industry); in three other cases the terms of the licensing deals were unknown to the particular individuals replying to our questionnaire. Presumably, this lack of information was a result of licensing being handled by another department of the corporate management structure.

In about one-third of the licensing agreements in our sample, right to use the trademark was part of a general licensing package embracing know-how, technical assistance, and sometimes patents. In these package cases no specific royalty for the trademark is usually assessed, although this may figure in the overall price or royalty rate set for the entire technological package. In cases where trademarks were separately licensed, the royalty rate was typically in the range from 1 to 5 percent of sales, depending on the nature of the product.

MARGINAL SEARCH AND REGISTRATION COSTS

Information was sought on the cost of trademark search and registration activities, broken down into specific costs of discrete operations. Twenty-one of the second questionnaire respondents provided these data. Those that did not provide such data indicated, in most cases, either that no new mark had been adopted recently, so that costs were no longer ascertainable and would not be current, or that if a new mark had been adopted recently, the specific costs applicable to that mark had not been segregated from the general expense of all trademark activities. We asked that costs be given for the last trademark the company had adopted and had used for at

least one year. Costs were to be limited to preadoption outlays, registration charges, and promotional expenses during the first year following adoption.

The 21 companies who did reply with data or estimates on specific costs of search and registration activities indicated these costs were extremely low. Six companies reported spending under \$100 and 14 reported spending less than \$200. Only seven companies reported spending more than \$200 with the maximum reported outlay being \$800 and the other six being under \$500.

We interpret these reports as generally including only readily identifiable additional expenses, i.e., marginal costs of search and registration, and as not containing overhead allocations of time spent by regular company employees, legal or otherwise, on these activities.

CONCLUSIONS

The 73 respondents' returns indicate quite clearly the direct correlation between company size and number of trademarks owned in the U. S. and abroad. No such obvious conclusion, however, can be drawn on the extent to which these companies' sales growth is attributable to their investment in trademarks; or whether their investment in trademarks is, in fact, the outgrowth of their affluent positions. The smaller firms (i.e., those with annual sales less than \$100 million) in our survey base (including manufacturers of consumer goods) did not seem particularly interested in expanding their trademark programs and attached no special emphasis thereto in any of their growth plans.

We are not doubting that trademarks are among the most valuable assets many manufacturers have; nor do we question the important role of trademarks as marketing tools, identification factors, and focal points of good will. Our survey indicates, however, that the main determinant factors regarding allocation of resources to trademark activity may not necessarily be based on whether a firm manufactures consumer goods. Industrial goods producers are also highly trademark conscious. The firm's size is perhaps the dominant factor in projecting a trademark program, whether for sales or image building purposes.

In the foreign field, there was a progressive increase in trademarking, by size of firm, among our respondents. The 15 firms with annual sales of over \$1 billion registered abroad almost two-thirds of

the marks they used in the U. S. These respondents also used about 200 other marks abroad which they did not use in this country.

The 20 respondent firms with annual sales between \$500 million and \$1 billion, registered abroad only about a third of their U.S.-used marks. In addition, they only used abroad 34 marks not used in the U. S.

The 38 respondents with annual sales less than \$100 million registered abroad only about a fourth of their U. S. marks; none used marks abroad that were not first used in the U. S.

The geographic pattern of foreign registrations was fairly consistent. Most of the respondents that did any business outside the U. S. registered their trademarks in Canada. Then, as they could afford it, they registered in selected countries generally in the following regional order of priority: European Common Market, British Commonwealth, Europe (other), Latin America, Japan, the Middle East, the Far East (other) and Africa. In this general regional order of priority, they concentrated on those countries that are members of the Convention of Paris for the Protection of Industrial Property. About 90 countries are now members of this Convention.¹⁰

The evidence collected in this study continues to support the general conclusion reported earlier that trademarks are extremely valuable to the business promoting them aggressively, but that little precision can be expected in the assignment of specific values to particular marks.

One approach we had hoped might be productive of valuation data involved looking to purchases and sales of corporate assets in which trademarks were involved. Our sample disclosed five cases in which such transactions had occurred. In none of these were our respondents able to fix a reasonably accurate value for the trademarks per se.

This lack of significant valuation data may reflect no more than the fact that top financial officers in the various companies, who probably negotiated these transactions in blocs of assets (all of which were in the multi-million dollar range), generally did not answer this

¹⁰ U.S. citizens are entitled to receive equal treatment (i.e., national treatment) in these Convention countries in the registration and protection of their trademark as well as patent and other industrial property rights. They are also entitled to certain special advantages which, in the trademark field, include a six months "right of priority" for trademark applications and the right to secure a foreign registration without the necessity of a prior-home registration. All European countries are members, as are the British Commonwealth countries, nine countries in Latin America, most of the Middle East and African countries, and a number in the Far East, including Japan and the Philippines.

question. Also in these spin-off and acquisition transactions, potential earning power, congruity with other assets and activities, and future operating plans were the controlling factors in the deals; consequently little effort was made to price individually the specific assets making up the package.

We continue to believe that actual market transactions may provide the best and most objective evidence of trademark values, but unfortunately have in this particular body of material at hand no firm evidence to support that view. Our feeling at present is that this evidence can be obtained, if at all, only in depth interviews with top corporate officers. To date our resources for trademark studies do not provide for this method of data gathering, which is relatively expensive.

Indirect evidence on the value of trademarks may be obtained by capitalizing the expenditures regularly made to maintain these values. We regard this evidence as indicative only of minimum values and as often misleading since maintenance activities may well be unrelated to the outlays currently made on trademark promotion. Despite these deficiencies, we did gather enough data on trademark valuations to enable us to acquire a fairly reasonable indication of the underlying good will therein which the firms seek to protect.

Respondents' complaints about weaknesses in our own U. S. law appear to center basically on the prior use requirement before a mark can be registered on the Principal Register. Problems which they raised regarding conflicting equities between the first user and a second good faith adopter and registrant of a mark may be difficult to resolve. Perhaps the Dirksen Bill, and its "intent to use" provisions which will enable certain conditional registration prior to use, will alleviate this problem considerably. Regarding foreign statutes, the respondents principally complained about the absence in many countries of "prior user" rights in combating a "pirated" registration. Another major complaint centered on the U. S. use of a classification system differing from that of Nice. We understand that the U. S. Patent Office is planning a study to determine how the Nice classification system might be adopted as a secondary system in this country for cross-reference purposes while still retaining the U. S. system as primary.¹¹

Regarding trademark licensing activities, some firms apparently

¹¹ I.e., when a trademark is registered, or an application is published for opposition in the U. S., it would show the Nice classification that would also be appropriate, as well as the U. S. classification.

have fairly standard base terms for such agreements, whereas others price each license separately, most probably on a value of service basis. Package license arrangements obviously cost considerably more than a simple license to use a trademark. We did not ask for specifics on these package licenses as firms are understandably cautious about disclosing this information; moreover, the royalty rate would be meaningful only when set alongside the full range of services and data provided to the licensee.

The low marginal costs of trademark search and registration activities by the respondents were in sharp contrast to their relatively heavy outlays, generally in tens or hundreds of thousands of dollars, spent on initial promotion of new trademarks. This contrast would seem to indicate that most new marks were either not very carefully researched prior to adoption or that the company felt fairly certain that confusion with similar marks would not be an important problem. In view of other available evidence to the effect that confusion can frequently arise at a later date and can become quite expensive, it would appear from this sample material, limited as it is, that companies considering the adoption of new marks might find it prudent to search them more carefully than is apparently the prevailing custom.

Our returns indicate that search costs prior to foreign registration are generally higher than similar costs prior to U. S. registration. This might be expected given the less complete knowledge of foreign material, the magnitude of search operations where more than one country is usually involved, and the difficulty of hiring competent search work abroad.

In general this material, while inconclusive, was indicative of the almost casual manner in which trademarks are sometimes adopted. We think this practice must necessarily give way to more orderly search and other pre-adoption procedures. An appropriate trademark is too potentially valuable a property to be selected with anything less than extreme care.

In the next phase of our survey, we plan to look into the economic aspects of marks used to identify services, as distinct from trademarks used to identify goods. In this connection, we will be seeking pertinent information on service mark practices of banks, insurance companies, transportation firms, public utility suppliers and others that provide and sell services. At a later date, we also plan to survey the trademark practices of the retail and wholesale trades and the practices of associations and other groups that use collective and certification marks.

APPENDIX

THE PATENT, TRADEMARK, AND COPYRIGHT
RESEARCH INSTITUTEOF
THE GEORGE WASHINGTON UNIVERSITY
QUESTIONNAIRE ON TRADEMARKS*Part I—Statistical Data on Trademark Ownership and Usage*

1. Does your company use one or more trade* or service** marks to identify its products or services? Yes _____ No _____
2. (a) What are the total annual sales of your products or services?

Under \$0.5 million _____	\$75–100 million _____
\$0.5–1 million _____	\$100–250 million _____
\$1–25 million _____	\$250–500 million _____
\$25–50 million _____	\$500–1 billion _____
\$50–75 million _____	Over \$1 billion _____
- (b) What approximate percentage do your sales of trademarked products bear to your total sales? _____
- (c) What are your main types of products (drugs, radio and TV equipment, electric motors, textile clothing, etc.)? _____

3. Please fill out following chart regarding the number of trademarks your firm uses:

	House Marks	Product Marks	Service Marks
(a) Approx. No. Used			
(b) No. Registered in U.S. (Principal Reg.)			
(Suppl. Reg.)			
(c) No. of marks shown in (b) also registered abroad†			
(d) No. of marks registered abroad but not registered in U.S.†			

4. (a) On the average, about how many foreign registrations do you acquire for each U.S. trademark you register? _____

* As used herein the term "trademark" includes any word, name, symbol, or device or any combination thereof adopted and used by a manufacturer or merchant to identify his goods and distinguish them from those manufactured or sold by others.

** The term "service mark" means a mark used in the sale or advertising of services to identify the services of one person and distinguish them from the services of others.

† Please list countries on separate sheet, or if impractical, by regional areas (i.e., Western Europe, Eastern Europe, Africa, Latin America, Middle East, Japan-Korea, Asia other, Canada, Australia-New Zealand).

(b) What are your more important considerations in deciding whether or not to register abroad?

Part II—Data on Trademark Selection

5. (a) Describe briefly your procedure for selecting new trademarks.

(b) How many U.S. trademark registrations were issued to you in 1965? _____, and in 1966? _____.

6. Please write a brief case history of one of your company's trademarks, indicating how and why it was selected, how it has been promoted and protected, what value (including good will) you would assign to it, and how it has contributed to the growth of your company and your company's present position in your industry. The mark need not be identified.

Part III—Experience Under Existing Trademark Law

7. Would you describe briefly the major problems you have encountered because of possible deficiencies in existing trademark law—in the U.S.? _____

abroad? _____

8. Have you experienced any difficulties regarding the following problem areas? If so, please explain briefly.

(1) Lack of comprehensive reference sources for used but unregistered trademarks.

(2) Registration of trademarks by foreigners to the detriment of U.S. business interests.

(3) Lack of uniformity in classification among world trademark laws.

(4) Others.

9. Have you any suggestions for research in any aspect of the trademark field that you believe would be especially useful to you?

Part IV—Data on Trademark Licensing and Sales

10. (a) Did you license any trademarks in 1966? Yes _____ No _____

(b) If yes, please fill out following:

Type of Marks Licensed in 1966	In U.S.		Abroad ¹	
	No.	Type of Licensees ²	No.	Type of Licensees ²
House Marks				
Product Marks				
Service Marks				
Others (specify)				

¹ If possible, please list on separate sheet countries or regional areas, as set forth in question 3(c) and (d), where marks are licensed abroad, by above types.

² Indicate whether licensee is subsidiary or otherwise affiliated; or whether non-affiliated.

(c) Please describe briefly those salient features, other than royalty provisions, generally included in your licensing agreements. _____

What is the usual royalty rate for your licensees? _____

11. If your company bought or sold assets in past five years that included trade marks, please fill out the following:

	In U.S.	Abroad
Total price of assets bought		
Price included for trademarks and value of good will		
Total price of assets sold		
Price included for trademarks and value of good will		

APPENDIX TO QUESTIONNAIRE

The following questions are designed to obtain specific information on trademark values and maintenance costs. While they may be difficult to answer, no body of information of this sort exists. Therefore, we are setting the questions forth as an appendix for your special consideration. The tabulated material will be extremely valuable to you in comparing your activities with general practices.

A. Regarding the last trademark you have adopted and used for at least one year, please fill out the following chart on (1) your search activities pertaining to adoption of the new mark; (2) the filing and registration charges for it; and (3) the outlay for advertising and sales promotion of the product for which it is used during the first 12 months.

Approximate Cost¹ to Your
Firm Based on Activities
Performed

(1) Type of Search Activity by Your Firm ²	In U.S.	Abroad
Patent Office record search		
Hiring of private search bureau		
Search in catalogs, other publications		
Market testing before final adoption of mark		
Other types of search (describe)		

(2) Costs for Registering Marks

Statutory filing fees		
Preparation of application		
Prosecution		
Opposition		
Other		

(3) Promotion of Product on Which Mark Used
(for First 12 Months)

Advertising Costs		
Sales Costs		
Other		

¹ Include attorney fees.

² Include costs for all candidates that you considered before final selection was made.

B. We are most interested in learning whether a firm can quantify economic value of trademarks used for the purpose of identifying the firm's goods and services and in representing their reliability and quality to the consumer. While we recognize the difficulties of assigning dollar values to the "good will" in trademarks and their value as business assets, we would appreciate any estimate or approximation of such value that could be provided. Please indicate, if possible, the "good will" your firm attributes to its trademarks by placing estimated dollar figures (representing such good will) in the following boxes, and describe briefly the basis upon which such valuation was made.

	Value	Basis for Valuation
Your house marks		
Your product marks		
Your service marks		
Your others (specify)		

C. What was your approximate total number of occasions for and outlay (including estimated attorney fees) on trademark policing and maintenance in 1966, broken down as follows?

	In U.S.		Abroad	
	Outlay	No.	Outlay	No.
Confusion surveys				
Clipping services and other surveillance				
Opposition proceedings				
Infringement suits				
Interference actions				
Cancellation proceedings				
Out-of-court settlements				
Renewal fees				
Others (specify)				

University Patent Marketing in a Developing Country

GIDEON SCHMUCKLER*

SUMMARY

AFTER SUMMARIZING CERTAIN ASPECTS of Israel's economy and the particular circumstances prevalent at its only technical university insofar as they pertain to inventions and patents, case histories of attempts to market some of them are described. Lessons to be learned from both the successful and the unsuccessful ones are summarized and a number of points listed that should be considered in any effort at patent marketing by an institution such as a technical university in a developing country.

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GENERAL BACKGROUND

THE FOLLOWING PAPER IS BASED ON the writer's experiences as Patents Coordinator of Technion—Israel Institute of Technology, the only technical university in that country. The peculiar problems, and the solutions experimented with in order to cope with them, would appear to stem from this configuration of circumstances: a university in a small country, poor in natural resources and having a population the size of a large city split into three major urban areas. One of these urban areas comprises the city of Tel-Aviv with its five satellite towns housing two-fifths of the entire population. Since 1948, when the State was founded, the population has grown fourfold, to roughly two and one-half million. The main contributory cause to that growth has been large-scale immigration which, however, has tended to taper off in the past few years as the program of the voluntary liquidation of large Jewish communities in certain parts of the world is nearing completion. Both industrialization and agricultural development have made great strides in those 20 years, and strenuous efforts are continuing to integrate the still very heterogeneous population into an ethnic—as opposed to a religious—whole. The scarcity of natural resources and the vast demands of basic development and security have between them been responsible for the specific economic and political structure of the country, which is a cross between state-directed capitalism and outright "etatism." It is in this context, then, that the lonely efforts of a Patents Officer have to be viewed.

UNIVERSITY PATENT POLICIES

At an institution with the triple purpose of training engineers and scientists, conducting pure and applied research, and helping local industry to overcome its technological and related problems, patentable inventions are almost naturally regarded as a by-product. However, while it is universally accepted that the primary purpose of the scientist is to contribute to the progress of science and to disseminate his findings through their prompt publication, it is also recognized that in many cases the hardly less important purpose of applying the new knowledge arrived at by the theoretician requires the "enlightened selfishness" of the businessman. The patent system as such serves as a catalyst in bringing this about, and here it acquires its significance for an institution, such as a university, which on the face of it would have little to do with the art of making money that is called business.

By engaging in the patent field, a university achieves two aims: the practical application of new principles and the bolstering of its funds by profits arising out of such activities. Technion, after many years of case-to-case handling of inventions made by its staff, had by 1962 gathered sufficient experience to draw up well-defined patent regulations of its own which were designed to assure both its own rights as employer and provider of laboratory and other facilities, and those of its inventive staff.

The regulations did not, however, stop short at that point but embodied principles that were thought to encourage staff members to look upon patentable inventions, as distinct from publishable discoveries and findings, as part of their recognized output. This was the thought behind the undertaking on the part of the institution to provide all the funds necessary for obtaining and marketing patents as well as for developing inventions wherever this was financially feasible. The only stipulation was that if any income should derive from the sale of patents, the actual out-of-pocket expenses incurred by Technion in regard to the patents concerned should be deducted from such royalties, after which the net proceeds would be divided equally between Technion on the one hand and the inventor or inventors on the other. Special provisions apply to inventions made by staff members outside their own official fields of interest or disciplines.

The wisdom of Technion's providing the entire funds needed for obtaining patents without making the inventor share at least a nominal portion has sometimes been questioned, but a discussion of this point is outside the scope of this article. On the other hand, it has never been doubted that the generosity embodied in the equal share principle of net income distribution should prove a valuable incentive to the creative minds among the staff.

UNIVERSITY PATENT PROBLEMS

Any university—and Technion is no exception—has to battle with some fundamental principles that are connected with its very nature. One of these is the extreme diversity of inventions, which potentially cover the whole field of human endeavor. This is accentuated at Technion, as it is the only technical university in the State of Israel and, therefore, cannot concentrate on a certain number of fields but must provide all the engineering and scientific knowledge required by a country striving to do many things at once.

Another problem, characteristic of the atmosphere of academic freedom, is the reluctance of scientists to hold back publication of their results until patents are safely lodged. Patenting is a lengthy procedure involving academic and administrative decision-making, the preparation of patent specifications in addition to the descriptions of the invention required by the decision-making bodies, and the uncertainty of ultimate tangible benefits.

A third problem is the lack of development funds which hampers the marketability of inventions—"mere scraps of paper" as one member of Technion's advisory body has unkindly termed the bright but uncommercialized ideas of the academics. Clients for inventions are notoriously reluctant to invest in anything that has not yet proved its worth at least on a pilot-plant scale.

A fourth set of problems characteristic of smaller countries concerns the responsibility of the institution toward the economy of the country it serves and by which it is supported: should patents be licensed to foreign firms for utilization in foreign countries; how much should be insisted upon as having to be left as the domain of the home country in the case of a world-wide license; should a local firm of necessarily limited means be preferred to a foreign firm of vast resources and huge markets.

Finally, there is the nature of the majority of inventions made by academic personnel, namely the fact that many of them are designed to overcome obstacles or improve procedures peculiar to their occupations, and sometimes their preoccupations. These may be perfectly patentable by themselves, but of only limited practical application in the outside world. The circle of prospective clients is thus often confined to the suppliers of sophisticated apparatus, a field not necessarily productive of the scale of remunerativeness hoped for by the inventor.

A number of case histories will serve to illustrate the points made and will, it is hoped, lead to a set of principles that might be applied in approaching solutions to the problems incurred.

SOME FALSE STARTS

The Case of the Small Semiconductor

Two physicists had developed a new and very cheap method of making a semiconductor type of component which had certain improved properties compared with those made by "conventional" methods. The term conventional has, of course, to be taken with a grain of salt, since all these techniques are fairly new. Now the

product of the process, according to the inventors, was practically indistinguishable from those made with the older methods, so that any infringement of the technique would have been almost, if not quite, impossible to discern. It was, therefore, judged unwise to file a patent application and an attempt was made to sell the process as a "trade secret" on an exclusive basis. It was offered to two local firms and to about a dozen foreign ones which had been taken from one of the recognized trade registers. With each offer was enclosed a sample of the invented article, made at considerable cost under laboratory conditions, an investment felt to be justified. In mass production, the price would become a tiny fraction of that.

Both local firms declined the offer, since the semiconductor was economical only in huge quantities, which was clearly beyond their capability to sell. Moreover, they had not until then been engaged in the manufacture of components and were not prepared to embark on a venture into that field on the strength of one item only, a reason more often than not militating against the local sale of inventions in small countries.

What was more serious, all the foreign firms, too, rejected the offer, which had been written in the form of individual letters duplicated by an automatic typewriter and contained scientific data and comparisons with other similar semiconductors without, however, disclosing the nature of the manufacturing process beyond stating that it was cheap. Most of the firms had tested the enclosed sample and had found, so they said, that it was not materially better than their own products. The attempt at marketing was, accordingly, abandoned.

It is hard to assess the reasons for the failure. Some firms are as a matter of principle unwilling to accept inventions that are not patented; others will have no truck with any inventors outside their own staff. The actual properties of the semiconductor may indeed not have been so much better than their own products to justify its introduction into their lines—at a considerable cost, beyond doubt. Here the inventors themselves may have been too sanguine in the assessment of their brainchild which, looked at by the cold eye of the purse-conscious businessman, was perhaps interesting from a scientific point of view but of no great money-making potential.

A Safety Device for Electric Motors

Based on a newly discovered electric principle involving a study of the magnetic field inside an electric motor, a professor of Electrical Engineering with the aid of a graduate student had built and

perfected a simple device that could shut off the current supply to an electric motor in case of a partial power failure. Most devices respond only to total power failure, but partial ones can be just as dangerous: If the power fails, the motor stops and, without a protective device, would start again, but unprotected by the usual precautions. If the power fails partially—if, say, one phase drops out in a three-phase system—the motor also stops, but since two phases are still supplying current, the wiring of the motor will burn out almost immediately. So much for the technical background.

Again firms at home and abroad were contacted; again the automatic typewriter wrote identical individual letters; but again the response was almost wholly negative. Only one firm asked for more particulars, which were supplied; but no further interest was shown. The others either did not reply at all or else declined the offer. In this case, as in so many others concerning university inventions, the device was interesting; it was even relatively well developed, but its profit potential was small. It seems to be an established fact that safety devices cannot sell apparatus. Motor cars are made attractive by their power, their speed, their elegant styling—rarely by the somewhat pedestrian appeal to the driver's desire to stay alive. Unless a law prescribes the introduction of such devices they will rarely be taken up. This is also true for many other devices with a "negative," preventive effect. As was seen in the earlier example of the semiconductor, manufacturers will even hesitate to introduce a new and cheaper method of making an article in their own accepted line of manufacture, simply because they can only in the rarest of cases be quite sure that the promised saving will rapidly reimburse them for the investment involved in retooling for the new process.

SUCCESSFUL EXAMPLES

While failures undoubtedly supply valuable data on which to base future policies, they can only show what should not be done: what kind of inventions, in our special case, would probably never sell. Successful or promising cases, too, have their lessons to teach, although in the last analysis each case has its own individuality, and reasoning must be helped on by a measure of good luck to be really correct. Here, then, are some successes and near successes.

A Case of Medical Engineering

A physician at a government hospital submitted a certain therapeutic problem to an engineer, serving as an assistant professor at the

same time, suggesting his particular way of solving the problem. The engineer devised apparatus capable of carrying out the treatment desired by the physician, and together they thus made an invention which, since it arose out of a sponsored research project, could be tried out in action and developed to a point at which it became attractive to manufacturers.

Two of these were approached: one a local manufacturer of electronic equipment who had made an international name for himself as the purveyor of some specialized medical gear; the other the foreign supplier of an intricate part for the apparatus which at that time could not be built in Israel. The foreign manufacturer expressed his immediate interest in the apparatus, which would open up a new field for his product, while the other parts of the equipment could either be made by him or obtained relatively cheaply on a jobbing basis from firms specializing in those lines. The local manufacturer proved considerably less enthusiastic because of his difficulties in obtaining sufficient development capital. Although the device had been refined to a great extent, it was as yet far from being foolproof and capable of being safely handled by physicians or nurses. Nevertheless, the foreign firm was kept waiting and negotiations with the local manufacturer continued at a forced pace since it was thought desirable that the latter increase the number of items in his catalog. When the agreement for exploitation by him was finally signed and the foreign manufacturer notified of the fact, the latter at once offered his services as distributor, pointing to his considerable connections and widespread sales organization. At the time of this writing, the offer is still being studied and industrial development of the product is continuing.

The chain of events would appear to suggest a definite pattern for a line of action. The general terms of reference for decision-making should in this case be that local manufacture provides jobs for skilled and semi-skilled persons, that the largely foreign market earns much needed foreign currency, and that the expected royalties earn the university and the inventors the rewards needed, not least of all for encouraging others.

A New Transformer

A research team at the Faculty of Electrical Engineering came up with a special type of transformer with some very useful and surprising characteristics. Put in a nutshell, the invention was a relatively unsophisticated piece of equipment with highly sophisticated results: on

the face of it the perfect example of a device that could be manufactured by a moderately equipped firm making electrical goods for use both at home and abroad.

Accordingly, a number of patents were at once filed in several industrial countries in addition to Israel, and a local firm specializing in this particular line was approached. An option agreement was signed, but no license resulted. The reasons for this may be sought in the limited home market for the device and its comparatively large size and heaviness which would have made export technically difficult. A contributory cause may have been that the local firm, catering chiefly to the local market, had no foreign sales organization and no connections with any of the existing distributors. To establish such a connection, let alone set up an independent organization for just one product, seemed inadvisable.

However, a brief article on the uses of the invention was inserted in the English-language quarterly of the university, which is distributed to friends and well-wishers throughout the world, bringing news of developments at the institution as well as articles on scientific subjects of general interest. Nothing was heard for a long time—a year and more. The paragraph in the quarterly would have been forgotten had not a letter from distant Australia revived interest. A major government project seemed to indicate the need for a whole series of transformers with the very qualities exhibited by the Technion invention. A model was required and the local firm approached once more for help in building it. The request was turned down, mainly because the stipulated time limit could not be adhered to. In the meantime, however, the Society of Friends of Technion in a foreign country had succeeded in interesting two or three manufacturers there in the device and one of them had taken an option for one year.

Events now began to happen at a lively pace. By telegram and overseas telephone a quadripartite connection between Technion, the Society of Friends of Technion, and the two firms was established. One of the inventors was dispatched to the foreign firm holding the option, and after less than a week of hectic consultation and work a dependable and detailed offer was rushed to the Australian manufacturer, who was thus able to submit his tender to the government in time. Nothing came of this particular venture, but the other firm became convinced of the commercial possibilities of the invention, and a license agreement was entered into in due course.

A number of lessons may be learned from this story. The widest possible distribution should be given to news of patented inventions, although it is debatable whether this should be done—as it was in the present case—within the framework of a major publication containing scientific and technical articles for general consumption, and dealing with work going on or completed at the university; or whether, alternately, it should be in the form of a bulletin devoted exclusively to the invention. Both forms—and others that may be thought of, such as a regularly amended catalog of patents held—presuppose the existence of an effective mailing list requiring many years' work on the part of the public relations department.

The second lesson taught by this case—and by others too numerous to mention here—is the usefulness of some kind of permanent representative or agency in the major industrial countries of the world that can take care of the affairs of the inventing body, guide its efforts in finding suitable clients, and negotiate agreements and watch over their execution. Commercial attachés are obvious candidates.

The third and probably most important lesson is the recognition that the inventor is the best sales agent for an invention once a contact has been made and interest aroused. A university is in a particularly convenient position to "dispatch" an inventor for such a purpose. Academic personnel attend conferences, are entitled to sabbatical leave, take part in seminars and summer schools, and in general are of considerable mobility—or should be. Once the ground has been prepared commercially, the inventor's presence to smooth out technical problems is a valuable aid in "clinching the deal." It may, however, not be remiss to include a warning with this item of advice: the inventor should restrict himself to matters technical, since his peculiar relationship to the invention makes him a difficult and in many cases unwanted partner in commercial negotiation. In the case of Technion, this fact is expressly stated in the Patents Regulations: no deal is finalized without the inventor's approval; but while he may be present at negotiations, it is not he who conducts them. The scrupulous observance of this division of competences was to no small extent instrumental in the successful conclusion of the license agreement.

A Chemical Invention

A final example, which is a case where local industry was left entirely out of the consideration, will round off this recital of typical case histories. A chemist had discovered a new and surprising use of a

substance that had been known for some time but had served merely as a stepping stone for the manufacture of another, more complicated, substance. The invention was simplicity itself, and the substance could easily have been made locally by one or the other manufacturer in the field. Due to its highly specialized use, however, there would be practically no demand for it in Israel, but it should have great practical possibilities in certain other countries. None of the firms in Israel had the sales organization required for building a local industry entirely on exports—always a difficult proposition—so that it was even judged unnecessary to file an Israel patent application.

A number of foreign countries known to be active in the field were approached and two showed interest. Negotiation by correspondence proved a lengthy and not very effective procedure, and in the end an attorney in the country concerned was appointed to continue the talks. Progress was made and additional foreign patent applications were filed on the recommendation of one of the negotiating firms, care having been taken that this was done within the "Convention Year." The final fillip, however, was given when the inventor himself, having decided to spend his sabbatical leave in the country where the negotiations were most promising, could be consulted on an almost daily basis as to the finer technical points involved in the manufacture and use of the substance.

Inventors recruited from university personnel have the great advantage of being, in most cases, extremely skilled experts in the field of their invention. This fact, coupled with the practice referred to above of strictly relieving the inventor of commercial bargaining, should make for added attractiveness to a manufacturer dealing with a university, despite the limiting factor that university inventions are often of a somewhat recondite and specialized nature. A side effect of such contacts that should never be disregarded is the possibility of obtaining, either in addition to a license for the invention or as a substitute for it, the financing of a sponsored research project by the manufacturer who has become impressed by the technical competence of the inventor even if the particular invention that set off the negotiations was of little or no commercial value.

CONCLUSIONS

Certain basic concepts to be taken into consideration by a university wishing to sell its inventions will be seen to emerge from the above. Some of these maxims would appear to have general validity;

others are more appropriate for smaller countries with limited home markets, nascent industries, undeveloped export facilities, and other restraining influences.

(1) When choosing between local or foreign exploitation, due weight should be given to the requirements of the local economy as well as its capabilities—labor force, available raw materials, marketing opportunities and facilities, the provision of risk capital for development and manufacture. Wherever possible, local industry should be given preference, subject to the above considerations and others as appropriate.

(2) Adequate publicity is a *sine qua non* condition. Some inventions may be of interest, where their manufacture is concerned, to a restricted circle with which the inventor as an expert in the field is fully acquainted, so that direct “personalized” offers may be made; other inventions, like the transformer mentioned in one of the case histories, may be suitable for production by so many plants in the field that in order to reach them all, letters containing an offer could not possibly be typed but would have to be printed and would suffer the fate of so much printed matter. The publication of a suitable journal attractively styled is a useful vehicle for this type of invention. Alternatively, or in addition, such international commercial publications as the various “Products Directories,” “What is New In . . .,” et cetera, should also not be neglected.

(3) Internal publicity, broadcasting the results of successful negotiations, is an important incentive for other staff members to start thinking not only in terms of scientific publication, but also of making and patenting inventions. A university, where research is a way of life, ought to be a cornucopia of new and bright ideas.

(4) Making and patenting inventions should be made financially attractive and should also be used to assure a certain mobility to the staff—for negotiations, consultations, and the other activities connected with the sale of inventions.

It is as yet a moot point whether or not the patenting activities of a university result in a net financial gain to the institution (as distinct from the individual successful inventor), but the encouragement given to the staff to further their creative activities is an intangible benefit that no scientific body can do without. And, who knows, one day may see the birth of the one great invention that will, at the very least, pay for all those others that merely swell the catalogs.

An Outline of Important Changes in German Patent and Trademark Law

STEPHAN G. BESZÉDES*

THE NEW GERMAN PATENT LAW

Patent Applications Filed on or After Effective Date of October 1, 1968

(1) Procedure:

- (a) Examination with regard to the question of whether or not the patent application *evidently* meets the requirements of the German Patent Law (examination with regard to evident deficiencies). In other words, in this examination it is a question of the formal requirements (Article 26 of the German Patent Law) and the point whether or not the patent application is an invention, whether or not it may be utilized industrially and whether or not the utilization of it would be contrary to law or public policy (unless laws are concerned which restrict only the offering for sale or the putting into circulation of the subject matter of the patent application or, if the subject matter of the application is a process, of the product produced directly by the process) as well as in case of a patent application of addi-

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tion whether or not it is an improvement or further development of the main patent or main patent application. The examination with regard to evident deficiencies will be carried out after the official filing fee has been paid for the filed patent application. However, this will be the extent of the work performed by the German Patent Office for the official filing fee.

- (b) Search as to prior publication (prior art) is to be taken into account with regard to the patentability of the filed patent application only upon request and payment of a special official fee. This search may be requested by the applicant or somebody else. The filing date of the request for a search will be published in the official German *Patent Gazette* (*Patentblatt*). The result of the search will not include any explanation why the respective publications must be taken into account (no official action will be taken).

In case of a patent application of addition the search will not be carried out without reference to the main patent application. If the applicant does not request the search with regard to the main patent application within a term of one month on demand of the German Patent Office the patent application of addition will be treated as an independent application.

- (c) Examination as to patentability is made only upon request with payment of a special official fee which is higher than that for the search. This examination as to patentability will be carried out in the same way as it has always been done and may be requested by the applicant or somebody else, the latter of which, however, will not take part in the examination proceedings. The regulations with regard to patent applications of addition are analogous to those set forth under point b above. *If a request for examination as to patentability is not made within a term of seven years after filing the patent application, it will be considered as having been withdrawn.* The filing date of the request for examination as to patentability will be published in the German *Patent Gazette*.

The examination will be continued also in case the request for examination as to patentability has been withdrawn. In case a request for a search has been made earlier the examination proceedings will not begin till the search

has been brought to a close. *The request for the examination as to patentability may be made without a request for a search already when filing the patent application. In this case the proceedings will be identical to those so far except that beyond the official filing fee, the special official fee for the search and the special official fee for the examination as to patentability must be paid.*

- (d) The official files of patent applications will be laid open to public inspection irrespective of their examination when 18 months have elapsed from the German filing date or, in case of a Convention application, from the priority date (for example, 18 months from the date of U.S. priority so that the date of laying open the patent application to public inspection may be only six months from the German filing date) and after an indication of this has been published in the *German Patent Gazette*. There is no possibility of postponing this public inspection.

The manner of laying open the patent applications to public inspection is not yet determined but certainly the whole contents of the official files will be accessible to the public without any formality. It may be expected that a print of the application will be issued; this is to be distinguished from the prints of examined patent applications so far which will be maintained by the new German Patent Law.

Thus according to this manner of laying open the patent applications to public inspection there would be three publications, one more than previously, namely: (1) printed publication of the patent application irrespective of its examination after the expiration of the term of 18 months set forth above; (2) printed publication of the patent application after a favorable decision of the Examiner in the examination proceedings; and (3) printed publication of the granted patent optionally after opposition and appeal proceedings. All three publications will be considered as proper references with regard to other patent applications, which is of great importance in opposition proceedings.

It is to be noted that this applies also to the patent applications of one and the same applicant, i.e. the laying open of a patent application of an applicant to public inspection is to be considered as a prior publication with regard to a

later patent application of the same applicant, provided, however, that the later patent application is filed later than six months after the laying open of the earlier patent application to public inspection.

(2) Inspection of official files:

In accordance with the above statements (point d) the inspection of the official files of patent applications will be possible without any formality after the expiration of 18 months from the German filing date or, in case of a Convention application, from the priority date and after an announcement in the German *Patent Gazette* of the laying open of the patent application to public inspection. Inspection of the official files of other applications will be granted only upon request in which a legitimate interest must be proven.

(3) Fees:

Annuities must be paid also for patent applications, the first annuity being due not later than two months after the beginning of the third year following the German filing date. So far annuities had to be paid only for definitively granted patents; however, according to the new German Patent Law, annuities will be due also for patent applications irrespective of the examining proceedings. Moreover, the official appeal fee will be increased.

(4) The protection of patent applications which have been laid open to public inspection after the 18-month period as set forth under points 1d and 2 above:

The degree of this protection will be less than that in the case of patent applications which are published on the basis of a favorable decision of the Examiner (decision to publish—*Bekanntmachungsbeschluss*) in the examining proceedings. In the latter case, the applicant whose patent application is infringed has a right to claim omission and damages (the so-called provisional protection), whereas in the first case only a reasonable compensation but no omission and no damages may be requested. In the case where the patent application obviously is not patentable there is no claim whatsoever.

It will, therefore, be of still greater importance to file auxiliary applications for utility models (in cases where this is legally possible) and to make them independent after the laying open of the corresponding patent application to public inspection. Infringement suits in the case of patent applications which have

been laid open to public inspection after the 18-month period as set forth under points 1-d and 2 above may be interrupted by the Court of Justice up to the final decision about the grant of a patent if the so-called provisional protection is of importance. If no request for examination as to patentability of the patent application from which rights have been asserted has been made, the Court of Justice must require the applicant to make this request within a certain term. In case no such request is made no rights can be asserted from the patent application in question.

(5) Alterations or amendments of the patent application text:

Up to the decision to publish alterations and amendments *within the original disclosure are possible*. However, there will be still other limitations: Up to the filing of the request for examination as to patentability only obvious incorrectness may be amended, and/or the deficiencies objected to by the Examiner may be eliminated, and/or the patent claims may be amended (or course within the original disclosure as stated above). There is some uncertainty with regard to the question of whether the indication of the laying open of the patent application to public inspection in the *German Patent Gazette* is to be considered as the date up to which alterations and amendments of the patent application text (again within the original disclosure) are permitted.

It is a very important feature of the new German Patent Law that no rights can be derived from "inadmissible extensions" (that which is not present in the original disclosure) of a patent application. Although, according to the present German Patent Law, it is not possible to maintain an "inadmissible extension" in a patent application and/or to claim for it the same filing date, it is possible to divide out the "inadmissible extension" part of the patent application and to file it as a separate patent application, claiming as its filing date the date of the first disclosure of the "inadmissible extension," for example, in a reply to an official action, in a new specification or in new claims filed in the patent application from which the "inadmissible extension" has been divided out.

According to the new German Patent Law this is no longer possible. In other words, in case of an "inadmissible extension" of a patent application, it will not be possible to claim the priority of the date of the first disclosure of the "inadmissible extension."

sion" made in the patent application. Nevertheless, such an "inadmissible extension," after the laying open of the said patent application to public inspection, will be considered as being a proper reference with regard to subsequent patent applications (also with regard to those of the applicant after the expiration of a term of six months from the laying open of the said patent application to public inspection).

Hence, the only possibility will be to file the subject matter of the "inadmissible extension" within an entirely separate new patent application, but this will be limited by the fact that, as just mentioned, the first disclosure of the "inadmissible extension," after the laying open to public inspection of the patent application containing the said first disclosure of the "inadmissible extension," may constitute a bar as to the patentability of the new patent application directed to the subject matter of the "inadmissible extension."

Summarizing the above, it is very risky to make "inadmissible extensions" within one and the same patent application since these may be very detrimental and no rights can be derived from them anyhow. Hence, the German practice which has been rigorous with regard to extensions of patent applications will be still more severe according to the new German Patent Law.

- (6) Indication of references (citations) by the applicant:
According to the new German Patent Law the applicant, without invitation, must indicate the countries in which he has filed corresponding applications with the serial numbers thereof and the references cited in the countries in question.
- (7) The inventor's nomination must be filed at the German Patent Office within a term of three months after the filing of the patent application. Hence it is advisable to file the inventor's nomination when filing the patent application.
- (8) Filing copy of the application the Convention priority of which is claimed for a German patent application:
A copy of the foreign application, for example, U.S. application, on which the Convention priority of a German patent application is based must be filed at the German Patent Office upon request by the German Patent Office within a term of two months. Since the German Patent Office will make this request immediately after filing the patent application it is advisable to file the priority documents simultaneously with the German patent application.
- (9) Chemical inventions:

In German patent applications and patents concerning chemical materials, medicaments, foodstuffs and luxuries, claims directed to the products (product claims) will be permitted. This regulation of the new German Patent Law as an exception already came into force on January 1, 1968. Thus it will be possible to protect medicaments, foodstuffs and luxuries consisting of one or more ingredients. Moreover also in the case of chemical materials it will be possible to obtain the grant of claims directed to the chemical materials themselves irrespective of whether they consist of one or more compounds. However, there are some problems.

For example, it is not clear whether product claims without indication of the use of the chemical materials (absolute product claims) or whether only product claims containing the indication of the use of the claimed chemical materials will be granted and how the jurisdiction will interpret the product claims. According to the provisional instructions of the President of the German Patent Office, absolute product claims will be permitted for the present. Furthermore it is uncertain if chemical materials, and in addition, processes for the production thereof, will be patentable. It is possible that only in the case of peculiar processes, both claims directed to the materials and claims directed to the processes will be granted (the question being whether they can be contained in one and the same patent application or in separate patent applications for the materials and the processes), whereas in the case of processes of analogy only product claims will be permitted. In case of macromolecular materials it is advisable to indicate the characteristics thereof completely, at least in the specifications of patent applications, since it is uncertain which will be considered as being sufficient.

Patent Applications Filed Before October 1, 1968

- (1) Old patent applications for which the decision to publish has been issued or which have been rejected by the German Patent Office before October 1, 1968:

The present German Patent Law will apply to these patent applications except that annuities must be paid for those third and subsequent years from the filing date which will begin after the new German Patent Law goes into effect on October 1, 1968.

- (2) Other old patent applications:

The new German Patent Law will apply to them with the ex-

ception of the following special regulations:

- (a) The date of the laying open of the old patent applications to public inspection and the publication of the indication of the laying open of the patent application to public inspection will not take place until a period of six months has elapsed after a notification to the applicant (either by a notification especially to him or by a general notification in the German *Patent Gazette*).

- (b) The extent of inspection into the files of the old patent applications:

In case the applicant takes no steps, the entire contents of the official files of the patent application will be laid open to public inspection. On the other hand, in case the applicant files complete new documents (a new specification, new claims, and if necessary, new drawings—of course within the original disclosure) within a term of six months after the notification to the applicant set forth under point a above, only the new documents will be laid open to public inspection.

- (c) The notification mentioned under point a above has another important consequence. *Only from this date will it be possible to make the request for an examination of the old patent application as to patentability after paying the special official fee. Since the order in which the notifications are made will be determined by the President of the German Patent Office, and under the new German Patent Law no term has been fixed for this, unfortunately, a considerable delay of the examination of the old patent applications is to be expected.* Moreover the old patent application will be considered as having been withdrawn if within a term of two years after the notification mentioned under point a above (in case this term expires later than seven years from the filing date of the patent application) no request for an examination as to patentability has been made.
- (d) Old patent applications which contain disclosures of chemical substances, medicaments, foodstuffs and luxuries:

The date of the first disclosure of these materials in the old patent application will be recognized as the filing date of new application texts directed to the materials themselves. A Convention priority could be claimed no later than February 29, 1968. In order to be on the safe side,

however, it is advisable to file revised claims and revised specifications comprising the product features (and the process features).

GERMAN UTILITY MODEL LAW

The German Utility Model Law remains substantially unchanged.

THE GERMAN TRADEMARK LAW

- (1) Introduction of a new provision on the compulsory use of trademarks.

In opposition proceedings the applicant for a contested trademark will have the right to make the objection that in the last five years previous to publication of his applied for trademark, the opponent had not used the trademark on which he based the opposition and provided that the latter trademark had been registered definitively for at least five years before the date of publication of the trademark. In this case the opponent will have to furnish counterevidence with regard to the products in question since the opposition will be taken into consideration only with regard to products the use of which within the last five years defined above will have been proven. This compulsory-use, 5-year provision will not begin before October 1, 1968.

In suits for cancellation, similar objections can be made by the holder of a contested trademark against the trademark on which the suit for cancellation has been based. Moreover, the lack of use of a trademark (which has been registered definitively for at least five years) within the last five years will be a ground on which a suit for cancellation can be based. However, use of this trademark after the threat of cancellation, or a use of the trademark after the publication of a similar trademark applied for later (in case the applicant of the latter or his assignees has made a request for cancellation within a term of six months after the said publication) will be disregarded.

- (2) Several official fees will be increased.
- (3) The suit for grant of the registration of a trademark at the regular civil courts, in spite of a negative decision of the German Patent Office and/or German Federal Patent Court, may be lodged only within a term of one year from the validity of the said negative decision.

FORUM

Although the primary purpose of *IDEA* is to communicate the research work of the Institute, it also serves as an educational vehicle for the exchange of informed opinion. The positions taken by the authors of papers and notes in this section are not necessarily those of the Institute. It is hoped that the material published in this section will stimulate researchers to undertake further study of the issues.

Patents and U.S. Foreign Policy

LEONARD J. ROBBINS*

INTRODUCTION

THE THEME OF THIS PAPER deals essentially with the delicate problem of executive power versus Congressional prerogatives, with the added difficulty that a scientifically oriented area is involved.

The U.S. Department of State necessarily and properly operates with considerable secrecy. But how far is it entitled to proceed along new paths, and to make commitments where Congressional sanction is ultimately required, before critical outside appraisal by the private sector is justified?

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EDITOR'S NOTE: *A copy of this paper was transmitted at the author's request to the State Department previous to publication. Another paper on this subject will appear in a subsequent issue of IDEA.*

It would be dull to try to explain what is a complex situation in non-controversial terms. Like Goethe "I can promise to be upright but not to be unprejudiced."

PATENT PROBLEMS—NATIONAL AND INTERNATIONAL

The surging tides of technical innovation since the end of the second world war have resulted in considerable difficulties for patent offices and for patent applicants in the United States and many other countries.

Patent systems throughout the world can be divided into two very broad categories:

(a) *Registration systems* in which patents are granted without any examination or with merely limited examination of formalities, so that their scope and validity can be determined only by the courts if they are involved in litigation, and

(b) *Examination systems* in which patent applications are examined to a greater or lesser extent for novelty and patentability and are subject to revision of the scope of the claims and disclosure before they are granted, so that the resulting patents have some *prima facie* presumptions as to scope and validity.

It is generally recognized that the limited monopoly rights of patent owners and the related rights of the public to disclosure of new inventions are best served by strong examination systems, and in fact, apart from a few exceptions, the patent systems of the major industrial countries are in the second category.

However, the strict examining patent offices require highly skilled personnel, and for a variety of reasons, usually budgetary, they have not in recent times been able to expand at a rate sufficient to cope with the increasing numbers of patent applications filed each year, resulting in a growing backlog problem.

The rapid post-war increase in world trade has produced another problem. The highly successful International Convention for the Protection of Industrial Property (or Paris Union),¹ which has been in existence since 1883, permits an applicant in one country to file with priority in other Convention countries within one year from the original filing date, thereby enabling foreign filing to be effected in

¹ The history and latest text of the International Convention can be conveniently studied in a Report on Hearings before Subcommittee No. 3 of the Committee on the Judiciary (House of Representatives) dated June 15, 1961, Serial No. 8.

an orderly manner without undue haste. (The simple operation of the International Convention is supervised in Geneva by the United International Bureau, for the Protection of Intellectual Property—known by its French initials as BIRPI—which also looks after various other international arrangements and treaties dealing with intellectual property.) But this preservation of rights for a year is now usually insufficient for an application to be examined and evaluated in an originating examination country, and for foreign filing to be subsequently effected if considered desirable. Where potentially valuable inventions are concerned, particularly in competitive fields, it is necessary as a form of insurance to file identical applications in a large number of countries. Searching for novelty is thus duplicated in the examining patent offices, aggravating their backlogs, and substantial foreign translation and examination expenses are incurred before the commercial prospects are known.

The Netherlands invented “deferred examination” as a solution, by which an applicant has his application published 18 months from filing, but can voluntarily defer novelty search and examination for patentability up to seven years, although an interested third party may independently trigger both investigations. This has been in successful operation in the Dutch Patent Office since 1964 and the latest statistical reports indicate a substantial reduction of the current patent office work load.² Germany will switch over to a similar system of deferred examination in October 1968. Japan, Australia, and other countries are also exploring the deferred examination solution.

Deferred examination does reduce patent office backlog by separating sheep from goats. It tends to restrict the labor of examination to applications claiming reasonably significant and successful inventions, while those covering mediocre or unpatentable inventions become abandoned. Also, if an applicant requests a prompt novelty search, the patent office can act without delay so that the applicant has ample time to evaluate the invention for foreign filing during the Convention year. Unfortunately, and probably due to insufficient knowledge of the voluntary aspect of the Dutch experiment, deferred examination is looked upon with deep suspicion in the United States. Theoretical disadvantages have been emphasized, but not practical advantages.

The U.S. Patent Office has tried various other expedients, such as

² Paper delivered by C. M. R. Davidson, a Dutch patent attorney, on November 3, 1967, at the 41st Annual General Meeting of the Patent and Trademark Institute of Canada.

compact prosecution and various internal procedural reforms under the present vigorous leadership of Commissioner of Patents Brenner.

Several years ago there was considerable publicity to the effect that we were rapidly heading for an international "patent crisis."³ About this time, it would appear that the State Department became interested. The Commerce Department normally controls the Patent Office, but in 1965 a joint task force, composed of high-level officials of the State and Commerce Departments, was established which recommended the subsequently adopted integration of their economic and commercial activities and personnel overseas.⁴ Since then the State Department has actively participated in proposals for overall "international cooperation" solutions and has asserted that this is the authorized and established foreign policy in this field of the U. S. government. Great pressures have been and are now being exerted to rush these proposals through to completion.

Some months ago the Chairman of the U.S. Atomic Energy Commission, Glenn T. Seaborg, echoing the words of Adlai Stevenson years before, said "The successful occupancy of this tiny planet by man could best—or perhaps only—be accomplished through international cooperation."⁵ All men of goodwill must agree that internationalism is essential in matters such as food production, population control, and nuclear weapons, all of which involve survival of the human race. In fact, the "internationalism" of the State Department in the present era may possibly be regarded by future historians as a turning point in the world's history. But industrial property rights, of which patents form a part, are non-material and elusive—a very sophisticated modern legal concept—and the requirements of the large, the intermediate, and the small countries, differ very widely so that no all-embracing solution is practical.

The State Department has shown admirable initiative, and without this the international arena might well have remained preoccupied by discussion rather than action. But catalytic activity and leadership are two different matters. In its zeal for prompt action, the State Department has entered a technical-legal field with preformed ideological concepts. The proposals it is sponsoring might in practice

³ See, for example, "Crisis of National Patent Systems and Necessity for International Solutions," by Dr. Kurt Haertel, President of the German Patent Office, published in 1965, in "Creative Ferment in World Patent Systems," by the National Association of Manufacturers. However, it is significant that Germany has actually adopted a national solution and will begin operation of deferred examination (similar to the Dutch system) in October 1968.

⁴ Department of State *Newsletter* (March 1967), p. 5.

⁵ *SCIENCE*, Vol. 158, No. 3798 (October 13, 1967), p. 226.

have opposite effects to those contemplated and in fact might involve the U. S. in complications that could actually be inimical to our own interests. Actually, simple and more satisfactory alternative proposals are available.

THE CHRONOLOGY OF EVENTS

After the interest of the State Department was aroused, the following events have taken place here and abroad in rapid succession:

(1) April 1965: The President's Commission on the Patent System was established.⁶

(2) July 1966: An announcement concerning administrative and structural reforms of BIRPI was issued.⁷

(3) September 1966: On the initiative of the U.S. delegation to the International Convention, BIRPI was requested to "undertake urgently a study of solutions tending to reduce the duplication of effort both for applicants and national patent offices. . . ."⁸

(4) September 1966: The draft of a Convention to establish a World Industrial Property Organization (WIPO) prepared under BIRPI auspices was published.⁹

(5) November 1966: *The Report of the President's Commission on the Patent System* was issued.¹⁰

(6) February 1967: The texts of the identical U.S. Senate and House bills entitled "Patent Reform Act" were released.¹¹

(7) May 1967: The draft of a Patent Cooperation Treaty (PCT), prepared under BIRPI auspices, was published.¹²

(8) July 1967: The delegates to a diplomatic conference at Stockholm signed the final text of the WIPO Convention.¹³

(9) October 1967: An International Committee of Experts met in Geneva to review the initial draft text of PCT.¹⁴

⁶ Executive Order No. 11215 (April 8, 1965). The membership of the Commission was announced on July 23, 1965.

⁷ BIRPI general information paper entitled "The Proposed Administrative and Structural Reform of BIRPI." (Geneva: July 1966).

⁸ BIRPI document PCT/I/2, p. 3. (Geneva: May 31, 1967).

⁹ BIRPI document S/10. (Geneva: September 16, 1966.)

¹⁰ "To Promote the Progress of . . . Useful Arts" In an Age of Exploding Technology. Presented to the President by the Commission on November 17, 1966.

¹¹ S.1042 and H.R.5924, 90th Cong., 1st Sess., introduced February 21, 1967.

¹² BIRPI document PCT/I/4. (Geneva: May 31, 1967.)

¹³ "Convention Establishing the World Intellectual Property Organization," signed at Stockholm on July 14, 1967. BIRPI document S/284. (Geneva.)

¹⁴ BIRPI document PCT/I/11. (Geneva: October 20, 1967.)

Now, in February 1968, various steps are being initiated by BIRPI with a view to meeting criticisms from many quarters and attempting to prepare a revised version of PCT before the end of 1968.

Various officials of the State and Commerce Departments, including the Commissioner of Patents, have implied in speeches and published statements, with greater or less emphasis, that the congruence of all these events is merely fortuitous and that some of them are not directly interrelated. However, there is considerable internal and external evidence that seems to indicate otherwise.

For instance the U.S. Patent Office has established an international division in Washington (the Office of International Patent and Trade-mark Affairs) which is actively recruiting additional staff. Also it has set up an office in Geneva for cooperation with BIRPI: the United States is undoubtedly the only country with a branch patent office on foreign soil. Teams of officials from the State and Commerce Departments have toured the country praising the merits of their proposals before business groups.

The original key to this enhanced international participation appears to reside in Section XXXV of the *Report* of the President's Commission, which states

The Commission believes that the ultimate goal in the protection of inventions should be the establishment of a universal patent, respected throughout the world . . .

subject to the proviso that

. . . Any attempt by revolutionary change, to scrap present systems in favor of new ones, in the United States or abroad, is neither feasible nor desirable. It is, however, both possible and advantageous to promote and direct interim steps towards the ultimate goal—a universal patent.

THE "UNIVERSAL PATENT" CONCEPT: GOAL OR MIRAGE?

When the Commission's *Report* was first published, many people were puzzled by Section XXXV. It clearly went far beyond the terms of reference of the President's original Executive Order.¹⁵ The practical implications of the term "universal patent" are somewhat overwhelming in the present framework of U. S. antitrust law and

¹⁵ In Executive Order 11215 (*supra* note 6) the functions of the Commission were defined and included "ascertaining the degree to which our patent system currently serves our national needs and international goals." The Order stated that "the Commission shall make an independent study of the existing patent system of the United States including its relationship to international and foreign patent systems . . ."

there was a tendency to dismiss Section XXXV as some vague gesture directed towards international goodwill. However the unexpected burgeoning of universality can hardly have been accidental, and it therefore seems clear that the intent of Section XXXV should be taken seriously. Apparently it expresses the official policy position of the State Department (and by implication that of the present Administration), and accounts for the accelerating time table of interwoven events. After considering further public statements and news items, the only conclusion possible is that the U.S. Patent Reform Act, the Patent Cooperation Treaty and the World Industrial Property Organization should jointly and severally be regarded as "interim steps toward the ultimate goal—a universal patent."

Is a universal patent a possible goal and if so, is this desirable?

A straightforward riposte to universality is that man is essentially a territorial animal and will remain so unless his genetic inheritance is altered. If this is regarded as too brief an answer let us turn to statistics.

It is of course possible to prove almost anything with statistical information—suitably arranged and edited. However the authentic worldwide yearly figures (very comprehensively and neatly presented by BIRPI in *Industrial Property*), deserve more than passing attention.

For example, the complete statistics for the year 1965, available in December 1966,¹⁸ show that the total number of new patent applications filed by nationals in their own countries was approximately 382,000—including about 100,000 inventors' certificates in Russia. But the total number of applications throughout the world was about 725,000. The unsophisticated might therefore assume that on the average each originating national application was filed in only one other foreign country—hardly a statistical basis for any need for a worldwide patent system.

However this would be unfair and misleading. The broken-down figures for the same year are far more instructive. They demonstrate that:

(a) Applications filed in the developing countries are rarely filed abroad.

(b) A limited number of applications originating in the smaller industrialized countries (i.e. smaller in industrial capacity as distinguished from total population) are filed mainly in the

¹⁸ *Industrial Property* (Monthly Review of BIRPI). Annex to No. 12. (Geneva: December 1966.)

major countries on a very selective basis.

(c) The great majority of widely filed foreign applications come from only four countries, namely the U.S.A., Japan, West Germany, and Great Britain, which between them account for over 50 percent of all originating applications.

(d) If Russia, now a member of the International Convention, should become a factor in the international field—as it apparently promises to be—then the four will become five and will account for about 75 percent of all originating applications.

Therefore the broken-down figures only indicate real international activity in the patent field by a small number of major countries. But this is still not enough; it is also necessary to consider the subject-matter of patents.

At least half the multiple filings of patent applications are in the chemical field. This is due to the fact that competitive manufacture of chemicals and pharmaceuticals, as compared with other industrial products, can occur in relatively underdeveloped regions. Also, owing to the apparently never ending "Italian situation" (due to the hole in the Italian patent law, going back to the time of Mussolini, which prohibits any patents whatsoever for pharmaceutical inventions),¹⁷ widespread foreign protection for important pharmaceutical inventions is necessary to bar Italian importation since infringement cannot be stopped at its source in Italy. In all other technical fields, outside the chemical industry, the potential sources of infringing manufacture, outside the major industrial countries, are quite limited and in fact pinpointed by specific conditions.

Thus present statistical evidence, treated with the greatest reserve, indicates that multiple foreign filing is highly specialized as regards nationality and subject matter and is not "universal" in character.

However if the 150-odd national governments at present existing in the world should decide that the universal patent concept is actually beneficial, in spite of the evidence to the contrary, then clearly a single supranational universal patent office would ultimately be necessary.

It is reasonable to predict that such a universal patent office would also handle utility models and designs. In 1965 there were about 160,000 national utility model applications and about 76,000 national design applications. Adding the 382,000 originating national patent applications previously mentioned, there is a grand total of

¹⁷ See "Pharmaceutical Patents in Foreign Countries," by L. J. Robbins, in *Advances in Chemistry Series*, No. 16 (June 1956), p. 230. (American Chemical Society.)

nearly 620,000 in these three technical categories which the supranational universal patent office would have to cope with and in fact take over from national patent offices. In the interest of efficiency and economy national patent offices presumably would finally be eliminated, or relegated to the status of mere clerical record sub-offices.

To handle only 1965 output, the universal patent office would therefore have to be at least four or five times larger than the present U. S. or German patent offices (both of which are already in grave difficulties). Conservative extrapolation indicates that a much larger size would be required even before the end of the present century.

It seems highly unlikely that all nations of the world would agree to a single universally acceptable language just for patent rights. Therefore a universal patent office might well become a new Tower of Babel. Where would it be located? Where would the staff come from? And how would the expenses be paid?

The idea that examination for patentability on a vast scale in a supranational organization would be better than examination in national offices—appealing as it may seem at first sight—does not take into account human nature, human failings and national backgrounds. Patents cannot be considered as “things” that can be measured, weighed, and packaged with a certificate of respectability.

Inventions are of three kinds—good, bad and indifferent. Subject matter varies from the extremely simple to the extremely difficult. Patent attorneys and examiners vary from the extremely competent to those unable to keep up with modern technology. All these ingredients are mixed in the subjective process called “examination” and are spiced with language subtleties. This is not a routine technician’s job. It involves a complex and changing interplay of ideas and often personal contact between the inventor, his patent attorney and the examiner. In fact, a valid patent is partly a work of art—difficult material shaped and molded by training, skill and instinct. Successful examination is not possible on mass production lines.

Since the ultimate purpose of a universal system would inherently be to replace national systems, the owner of an important invention would be in a very ambiguous position. He would have only one opportunity of obtaining patent protection. If turned down, all would be lost.

And what would the standards of the supranational office be? Industry demands patents of well defined scope. But inventions originating in some of the smaller or developing countries are often

of very marginal quality. If the supranational office refused them, the cry of discrimination would arise. The office could hardly have two standards. If it lowered the requirements for patentability, the whole purpose would be correspondingly weakened.

Since industry in the U. S. and abroad has not had sufficient time to consider all the consequences of a "universal patent" in some distant era, it is only possible to guess what its reaction is likely to be. Would large or small industry in large countries, small countries and developing countries, from their varied viewpoints, welcome the fact that several hundred thousand new patents might become effective in their territories each year? Would not the cost of merely watching the published art become an intolerable burden in time and manpower on research and development? Would not the large dominate the small? Would not marginal litigation clog the courts? Further speculations are futile until industry everywhere knows what it would be faced with.

As regards the courts, logic might indicate that a universal patent system would require its own specialized court system. But is this really not a preposterous suggestion from all viewpoints—political, technical and legal? How could a universal court (wherever physically located) handle litigation arising from millions of patents in over a hundred countries, in many languages? But if a universal court is split up into regional courts, what is the advantage over national courts?

Proposals for supranational patent systems, varying all the way from regional and political groupings to complete universality, are not new but have been around since at least 1902.¹⁸ Perhaps this is a noble concept, but stubborn facts have prevented any such schemes from being realized.

CENTRALIZED SEARCHING

On one topic at least practically everyone is in agreement. Duplication in searching the prior art to ascertain the novelty of the same invention by different national patent offices is a waste of time, energy and money. The most effective form of international cooperation in the patent field would clearly be a central search organiza-

¹⁸ A complete compilation of proposals in this field has been made by O. Bossing in "Grundfragen einer europäischen Gerichtsbarkeit in Patentsachen," published in 1959 by Ed. Wila Verlag fuer Wirtschaftswerbung, Wilhelm Lampl, Munich, Germany. A brief summary is given in "The Proposed New European Patent," by L. J. Robbins, in *PTC J. Res. & Ed. (IDEA)*, Vol. 5, No. 3 (Fall 1961), pp. 217-218.

tion serving all national patent offices.

The nucleus is already available in the International Patent Institute, known by its initials in French of IIB, which was established in 1947 by an international agreement, and which is located in the Hague and uses the excellent library facilities of the Dutch patent office.

However, merely to expand the present operation and present staff of IIB is *not* a satisfactory solution. Human searching is a highly skilled business if it is to produce only relevant significant art. An inefficient central search yielding numerous publications of merely possible interest, would not actually be economical when compared with the possibly redundant results from several different examining patent offices.

If we take the previous figure of some 382,000 originating applications a year and then consider that searching a patent claim covering quite simple subject matter by the use of present library methods may take several hours, it will be obvious that a central organization of conventional type would require many hundreds of searchers with accompanying supervisors and clerical staff and, of course, abstractors and classifiers feeding in new art continually. This would be only a beginning if the production of new applications increases.

Even ignoring language, location, and space difficulties, common sense indicates that such a huge search organization on conventional lines would be unwieldy and in fact an impractical bureaucratic monster. Furthermore in a conventional centralized system it would be impossible to catch prior copending unpublished applications in each country—an important factor involving possibly up to 10 percent of applications in a very active field.

The radical change-over to a computerized data storage and retrieval system is in theory the only alternative. Thus the ideal central search organization of the future would have no documents on its shelves. It would be in direct touch electronically (possibly via its own permanent satellites) with all the patent offices of the world (which would feed into it data concerning every application filed and patent granted) and also with all major technical libraries. To make a search, its computers would merely be programmed directly from a foreign patent office and its output would comprise a list of relevant prior art including prior unpublished conflicting applications in the country involved.

But this is still only a dream. In spite of daily electronic miracles, the achievement of an automatic general scientific library is very

difficult indeed.¹⁹ To adapt this to the special requirements of effective searching for the novelty of patent claims is still more difficult.

There has been much airy talk about computerized searching—generating considerable heat but shedding little light. The U.S. Patent Office has made some very praiseworthy investigations, but only in extremely limited areas of chemical and electronic patents, and with inconclusive results.²⁰ It appears that a full-scale pilot operation is necessary to find out whether computerized patent searching for international purposes is actually possible in the foreseeable future. This would involve formidable expense and could only be done effectively under multi-government sponsorship and possibly with help from the larger Foundations.

In the meantime, any international cooperation must be on the realistic basis that patent searching on conventional “human” lines, whether conducted in IIB or in individual national examining patent offices, is fallible and often leads to different results for the same invention.

THE PROPOSED PATENT COOPERATION TREATY (PCT)

The genesis of the proposed Patent Cooperation Treaty or PCT was described in a speech to the National Association of Manufacturers' (NAM) Patents Committee on September 8, 1967, by Mr. Eugene M. Braderman, Deputy Assistant Secretary of State, and an activator of the State Department task force above referred to. This speech has been reported as follows:²¹

Eugene M. Braderman, Deputy Assistant Secretary of State, then spoke on the genesis of the proposed Patent Cooperation Treaty (PCT). Mr. Braderman heads the negotiating team which is attending the meeting of 23 countries which began in Geneva on October 2, 1967, for the purpose of exchanging views on and negotiating another draft of the PCT.

The first seed for the treaty was planted at an international patents conference sponsored by the NAM in June 1965. Representatives of the U.S. Patent Office, the State Department, and other

¹⁹ “Information Storage and Retrieval,” by Ben-Ami Lipetz. *SCIENTIFIC AMERICAN*, Vol. 215, No. 3 (September 1966), p. 224.

²⁰ See “Information Retrieval Among Examining Patent Offices,” edited by Harold Pfeffer, U. S. Patent Office (Spartan Books: 1966). Also, “Modern Systems of Information Retrieval at the United States Patent Office,” by Gertrude A. Munafo. *JPOS*, Vol. XLVIII, No. 8 (August 1966).

²¹ *New York Patent Law Association Bulletin*, Vol. 7, No. 1 (October 1967).

interested government agencies, acting as an ad hoc committee, studied various methods of simplifying the filing and prosecution of patent applications throughout the world. In 1966, U.S. Patent Commissioner Brenner presented a proposal embodying the principles now contained in the PCT, to the Executive Committee of the Paris Union, which gave its unanimous approval. The BIRPI Staff, headed by Professor Bodenhausen, was charged with working out the details of a proposed Patent Cooperation Treaty.

In February 1967, a meeting was held between representatives of the United States, Great Britain, France, Japan, Germany and the U.S.S.R. From this meeting came an agreement on the basic principles of the Patent Cooperation Treaty.

Next, Mr. Braderman set forth the expected time table of the treaty and its ratification. If the October meeting produces an agreement, another redraft of the PCT will then be submitted for consideration by the different countries. He thought that the redrafting of the PCT would take several months. Mr. Braderman expected that the various countries would then spend the next two to three years discussing, revising and adding various proposals to the redrafted PCT. Thereafter, a formal treaty would probably be drafted, executed and ratified.

The first draft of PCT (hereinafter also called the BIRPI Plan) was therefore produced entirely by government officials after the "first seed" had been planted, without any substantial or effective subsequent consultation with industry or the patent profession either here or abroad—even though the production, maintenance and utilization of international patent rights essentially belong in the private sector. The BIRPI Plan is clearly based on the proposition that the "basic principles" referred to by Deputy Assistant Secretary Braderman are in line with the policy enunciated in the *Report* of the President's Commission and that the Treaty would be a step towards the goal of a universal patent. But if this goal is not valid, then the Treaty, if it ever went into effect, would likewise not serve a valid purpose; it would only create a permanent international bureaucracy (subject to the inevitable pressures and results of Parkinson's Laws) and would cause far more new problems than it would solve.

The BIRPI Plan was embodied in a remarkably comprehensive document, obviously the result of enormous effort, and comprises the text of the proposed Treaty with notes on each article, annexes and a memorandum on regulations. There are two parts. Part I deals with the filing of "international applications" through BIRPI, the obtaining of search reports by BIRPI and the forwarding of individual applications with search reports to designated countries to become regular national applications. Part II is optional and deals with the obtaining of "certificates of patentability" by BIRPI to accompany the national applications.

Many careful analyses of the BIRPI Plan have been made.²² It would be tedious and unnecessary to give any details here since we are essentially concerned with probable results.

As regards Part I it is contemplated that BIRPI would "hire" the facilities of the U. S., German, Japanese, and Russian patent offices, and also IIB, on a contract basis to make the novelty searches. As pointed out above, "human" searching is far from perfect, and the results obtained from these five organizations would certainly be extremely variable. The German office and IIB are able to search in English, German and French, and the Japanese office in Japanese and English. Only a few U. S. examiners can search in languages other than English. The Russian office is more or less an unknown quantity—except that the examiners can be extremely perceptive and extremely arbitrary. In addition, the documentation available in each office is different. It would require great effort and expense to produce some measure of uniformity and it is very doubtful whether the hiring fees, for which BIRPI would presumably be responsible, would justify this.

Furthermore, most of the patent offices in question are already overburdened with their own national work. There is certainly no guarantee that they could provide search reports for "international" applicants more promptly than for their own regular national applications.

Thus the intervention of BIRPI in an international filing system would not at best produce any results that the average applicant could not obtain by himself, and at worst would result in complications and unnecessary expenses and would not eliminate duplication of work.

As regards Part II, some or all of these examining patent offices would also be "hired" or "chartered" to go further and examine for patentability. Validity is the most speculative area of patent law. Each country has different requirements and definitions based on past history and national predilections. If patent office standards do not deteriorate, it is merely preposterous to imagine that "certificates of patentability" issued by the U. S., German, Japanese, and Russian offices would be mutually acceptable in these offices, let alone in the patent offices of other examining or non-examining countries.

Theoretically, applications corresponding to some 100,000 Russian

²² See, for example, "The Patent Cooperation Treaty—Utopia or Millenium," by Michael N. Meller, *JPOS*, Vol. XLIX, No. 8 (August 1967). Also "The BIRPI Plan for a Patent Cooperation Treaty," by Stephen P. Ladas, *IDEA*, Vol. 11, No. 2 (Summer 1967).

inventors' certificates and some 50,000 Japanese utility model applications, might be filed each year in the U.S. Patent Office, accompanied by "certificates of validity." According to its obligations under PCT, the U.S. Patent Office would have to process these applications. According to existing standards, most would have to be rejected as not patentable. But this would require expansion of the brand new U.S. Patent Office in Crystal City to at least twice its original size. The only alternative would be to grant such treaty applications at face value, thus flooding the U. S. with patents of foreign origin and finally throwing a huge new burden on the courts. Such speculations may seem far fetched, but should not be ignored in an impartial evaluation of the possibilities.

At the Geneva meeting in October 1967, "experts" were assembled from 23 countries to review the BIRPI Plan. They were overwhelmingly government, diplomatic and patent office officials rather than real experts in the handling of industrial property. Only five independent lawyers were included (from the U. S., the Netherlands, Italy and Mexico) and three industry representatives (from Switzerland and Italy). Only the Mexican delegation queried the fundamental basis of the BIRPI Plan; all the other delegations apparently considered their only function was to discuss the individual articles of the draft Treaty, i.e. as a viable *fait accompli* requiring only a clean-up operation concerning details. Observers from various interested organizations in the U. S. and Europe were present and brought with them resolutions expressing various forms of disapproval and requesting time for further consideration. These observers were indeed heard but were sidetracked into criticism of the parts and not of the whole.

In the official report of the Geneva meeting,²³ the only general observations on the draft Treaty are as follows, all the other observations being directed to specific provisions:

General Observations on the Draft Treaty

13. (a) With the exception of the experts from Mexico, all the experts expressed the view that the PCT draft was highly worth while examining further and, after appropriate changes, completing within the shortest possible time.

(b) However, some participants expressed the view that consideration of the provisions relating to international certificates (Chapter II) should wait until international filing and search were tested. Others were in doubt as to the usefulness of putting Chapter I into effect without at the same time putting Chapter II into effect.

(c) Several experts emphasized that a satisfactory solution of the language question was of paramount importance to them.

²³ *Supra* note 14.

In the original draft of this paper, dated November 1967, I wrote:

All recent statements by U.S. government officials imply that the Geneva meeting was a reasonable if not great success, that the State Department and the private sector are now working hand in hand, and that once the draft Treaty is revised to meet specific criticisms, while retaining its original form, everything will have been accomplished, present difficulties will disappear in the course of time, and all countries will gladly adhere to and ratify the Treaty. I submit that this is a dangerously misleading picture.

Now, in February 1968, the State and Commerce Departments are meeting at intervals with a Coordinating Committee comprising delegates from the principal U. S. Bar and professional organizations involved. However, this Committee is entirely unofficial and has no power to approve or dissent; it is merely a newly opened channel of communication between the public and private sectors.

There has been no indication up to now of any basic change in the orientation of State Department philosophy directed towards steps along the road to universal patents, or that any serious consideration has been given to the articulate objections that have been raised. In other words, the officials involved have apparently convinced themselves that PCT, whatever its exact form or substance, is an urgent necessity for the whole world in general and the U. S. in particular. Therefore, through the mechanism of BIRPI working groups and a series of international meetings, intense efforts are being made to produce a final text, by the end of 1968—just as the WIPO Convention referred to later was presented as a *fait accompli* in 1967.

Changes in the international handling of industrial property to secure greater efficiency and economy are long overdue. But such changes can be effected without complex new treaties and accompanying bureaucratic proliferation. I submit that no hard facts of urgency or need have been revealed that would justify the U. S. suddenly embarking on what might well turn out to be a frustrating adventure.

PCT, as originally envisaged or as modified within the original framework, would only have a chance of any successful operation whatever if a single multi-lingual search center available to all countries is established, and if the patent laws of all countries are made substantially identical. There is no viable middle way. A single search center is a conceivable possibility, but is far off in the future. Total harmonization of patent laws will only occur when the lion lies down with the lamb, and when the research and development activities and world trade operations of the United States, Europe,

Russia, the Far East, Africa and South America are all parallel and friendly.

Apparently little or no consideration has been paid to possible economic repercussions of PCT, in the United States or abroad.

In 1965, foreigners filed 22,312 patent applications in the United States. Let us assume this figure is now about 25,000 a year. The patent departments of large U. S. corporations are responsible for a small amount of this work through licensing and other arrangements. Principally, however, these filings from abroad are handled by private firms of U. S. patent lawyers in Washington and the New York and Chicago areas. The gross billing per year for filing and prosecution, is probably of the general order of \$10 million.

If the "universal patent" is actually to be the end of the PCT road, then a logical step would be for BIRPI (whatever its role, major or minor), foreign patent offices, and foreign patent agents, to do all the work and have their end product deposited in the U. S. Patent Office and automatically granted. Our international balance of payments would be reduced, with a corresponding saving to foreign interests at the expense of a segment of the U. S. patent profession. Also the United States would have a double patent standard and might well be flooded with easily obtained foreign-owned patents, with resulting future litigation problems.

On the other hand, if the U. S. government should insist that our standards of patentability must be maintained, even though we participate in PCT, then until that millenium when all patent laws are totally harmonized, prosecution of foreign-owned patent applications in the U. S. Patent Office would still be necessary, and probably a further search of the art beyond that provided by the foreign source. At this point the U. S. patent lawyer would have to come into the picture. I cannot believe he would be so altruistic as not to charge a take-over fee equivalent to an initial filing fee. Where then would be the savings under PCT for foreigners?

The same paradox in reverse would exist for foreign countries receiving U. S.-owned patent applications.

Foreign government officials clearly believe that the U. S. government wants some form of PCT to be enacted as soon as possible. For numerous reasons they are not prepared to oppose the might of the United States. However many responsible people, here and abroad, are gravely concerned that the State Department officials, who are considered abroad as representing the U. S. government, may make compromising commitments. Assuming the drive for PCT continues,

whatever its final shape or form, it will ultimately come before the U.S. Senate for ratification. If a number of other governments have by then previously ratified the treaty in the expectation of U. S. approval, to draw back then could cause a difficult or embarrassing situation for our government.

It therefore seems very desirable that there should be full public discussion without delay concerning the simple alternatives to PCT that are available.

THE ALTERNATIVES TO PCT

What, in essence, are the basic underlying problems faced by inventors, patent owners and the public, in the U. S. and abroad?

Beyond a certain amount of delay due to chronic shortage of staff, there are no serious difficulties in the pure registration countries and those countries that examine only for formalities.

In the industrialized countries having strict examination systems including, of course, the United States, the two basic problems are:

- (a) Patent office congestion leading to lowering of standards and delay in the grant of patents;
- (b) Duplication of effort and unnecessary expense in the filing and prosecution of patent applications in foreign patent offices for the same invention.

But inventive activity is unevenly distributed and the situation is not the same in major and minor countries. In the U. S. and Japan about 75 percent, and in Germany about 65 percent of all patent applications are domestic. However in all other countries, examining and non-examining (apart from the Iron Curtain countries which only participate at present to a minimum extent in the international patent field), foreign applicants account for well over 50 percent and up to more than 90 percent of all patent applications—the majority actually being U. S., German and Japanese applicants. Thus the U. S., Germany and Japan are in a special position, and their principal problem is one of internal patent office housekeeping.

On the financial side, the following information recently published by UNCTAD is of interest.^{23a}

Excluding transactions among the socialist countries and between those countries and the developing countries, the total world flow of technological payments probably amounted to about \$1 billion in 1964. Of this total, the United States accounted for over half (57

^{23a} "Trends and Problems in World Trade and Development," U.N. Publication TD/28/Supp. I. Section 31.

percent) the total receipts but only about 12 percent of the payments. The Western industrialized countries accounted for about 40 percent of the receipts but a much higher proportion (about 60 percent) of the payments. The deficit in their transactions was due to their heavy payments to the United States. All other countries, including Japan, Canada, Australia, the socialist countries and all the developing countries (except for the intra-trade of socialist countries and their transactions with the developing countries) accounted for less than 3 percent of the receipts but for 27 percent of the payments. Of these, Japan alone accounted for 13 percent of the payments, but only 1 percent of the receipts.

Thus in 1964 the United States received from foreign countries some \$570 million by way of license fees and royalties, much of which undoubtedly involved patents and related know-how. During the following year, 1965, the statistics in *Industrial Property* previously referred to,^{23b} indicate that in round figures U. S. applicants filed about 100,000 foreign patent applications (although of course possibly one-third of these may never mature into patents). If \$300 is taken as a reasonable average filing charge, then about \$30 million was spent on such foreign filing. Other expenses were naturally incurred for prosecution and maintenance of cases filed in previous years, but the total expenditure per year on filing seems to be only of the order of 5 percent of the income from abroad: the return on the U. S. investment appears adequate, to say the least.

It is indeed a practical and worthy aim to attempt to reduce such patent filing expenses by eliminating unnecessary duplication of work, but clearly cost is not a major problem for U. S. applicants as a whole, due to the very large profit. For all other countries, in varying degrees, the cost of filing foreign patents becomes of relatively less significance, for the simple reason that they file proportionately far fewer cases than U. S. applicants.

Thus no new international organization, whatever its form or shape, could hide or alter the stark fact that the United States is the supreme exporter of technology, and all other countries—even the most highly industrialized—on balance pay financial tribute to us.

It would seem to be elementary common sense that before any new scheme is adopted—

- (a) From the international viewpoint, reasonable proof should exist that in operation it actually would positively improve efficiency, and generally reduce multiple foreign patent expenses for applicants from all countries, and
- (b) From the U. S. viewpoint, reasonable proof should exist that

^{23b} See note 16 *supra*.

it would be advantageous to the United States. Department of State's own Foreign Service Manual, in Section 311, enunciates clearly and positively:

Treaties should be designed to promote United States interests by securing action by foreign governments in a way deemed advantageous to the United States.

The simplest analyses of the original BIRPI Plan for PCT, contemplating international filing through BIRPI, and the production of both search reports and certificates of validity under BIRPI auspices, indicate a very strong possibility that delays could be longer and expenses greater than at the present time. As the operating agency for PCT, almost inevitably BIRPI would grow. History does not have many examples of a bureaucratic organization ever being put into reverse gear.

Several very much simpler alternatives to the BIRPI Plan, not requiring international filing through Geneva, retaining an applicant's freedom of action, and designed to achieve the contemplated results more efficiently, have already been proposed.²⁴ It is not difficult to find solutions once the differences in foreign patent laws and practices are realistically faced. Here is the draft of another proposal in the form of a new Special Arrangement under the International Convention permitting applicants to choose a modified right of priority as an alternative to the normal procedure under Article 4D of the Convention while providing BIRPI with a new and useful record-keeping activity.

DRAFT OF A NEW SPECIAL ARRANGEMENT (UNDER THE INTERNATIONAL
CONVENTION) RELATING TO THE PROTECTION OF THE SAME INVENTION
IN SEVERAL COUNTRIES

Preamble. The contracting countries, being animated by a desire to facilitate the filing of patent applications and the grant of patents on the same invention in several countries, hereby conclude the present Special Arrangement, pursuant to the provisions of Article 15 of the International Convention for the Protection of Industrial Property (Paris Union), as last revised at Lisbon on October 31, 1958 (hereinafter referred to as the International Convention).

Article 1

A right of priority, as provided for in Article 4 of the International Convention, may also be enjoyed by an applicant who, as an

²⁴ The "Woodward Alternative Plan," by William R. Woodward, Patent Counsel of Western Electric Company, has been widely circulated among United States professional groups. In Europe the "FICPI Plan" is being sponsored by the International Federation of Patent Attorneys.

alternative to the procedure of Article 4D, files in any other country of the Union, within 12 months from the filing date of the first application, and for a nominal fee, a notification (or secondary) application, indicating merely a possible intention to proceed at a later date (subject to the provisions of the following Article 2).

Article 2

A notification (or secondary) application shall include:

- (i) A declaration setting forth and claiming the priority date of the first application, together with all relevant filing particulars thereof, a certified copy of said first application, and a summary of the claimed invention in the language of said other country.
- (ii) A declaration requesting postponement of all further action in said other country for a period not exceeding (x) years (e.g. 3, 4, 5?) from the filing date of said first application (subject to the provisions of the following Article 3).
- (iii) A declaration promising, before the expiration of said period of (x) years, either to withdraw said notification (or secondary) application without prejudice, or to convert the same into a regular patent application, with or without the claimed Convention priority, according to the laws and regulations of said other country, and simultaneously to submit a novelty search report from an authorized Search Organization (as designated from time to time in the Regulations under this Special Agreement).

Article 3

Each contracting country undertakes to postpone all further patent office action on a completed notification (or secondary) application for a period not exceeding (x) years and to maintain the subject matter thereof secret, except that:

- (i) If the domestic law of a contracting country provides for publication of patent applications after a specified period, then a notification (or secondary) application and all accompanying documents may be laid open to public inspection at the end of such specified period, unless previously withdrawn.
- (ii) If the patent office of a contracting country examines for patentability and finds that the subject matter of a notification (or secondary) application conflicts with that of a pending unpublished regular application, in said country, of a later effective date, or a pending unpublished notification (or secondary) application in said country of a later effective date, then the applicant may be called on to convert the notification (or secondary) application without delay and to file and prosecute a corresponding regular application with or without the claimed priority, whether or not a novelty search report from a designated search organization is then available, or to withdraw said application without prejudice.

Article 4

An applicant when converting a notification (or secondary) application into a regular application in accordance with Article 2 (iii) or Article 3 (ii) may include any revisions within the scope of the first application, whether or not priority is retained, and may combine several notification (or secondary) applications relating to a single invention, having priority dates lying within a period of 12 months

from the earliest, into a single regular application having multiple priority dates.

Article 5

If an applicant does not withdraw a notification (or secondary) application, or convert the same to a regular application, within said (x) year period, then the notification (or secondary) application will be treated as abandoned. The subject matter thereof will be maintained secret unless previously published.

Article 6

Each contracting country undertakes to send BIRPI (or any successor thereto) the priority and filing particulars of all regular applications filed under the provisions of Article 4 of the International Convention and of all notification (or secondary) applications filed under the provisions of this Special Agreement. BIRPI shall maintain coordination files thereof, that shall not be open to public inspection. Each contracting country also undertakes to advise BIRPI of the publication and/or grant of all such regular applications and converted notification (or secondary) applications. BIRPI shall then publish suitable particulars so that all published applications and granted patents in the contracting countries based on the same first application can be identified.

An applicant wishing to file in only one or two foreign countries might have no need for the alternative provided by such a Special Arrangement. However, it offers great incentives to tentative filing abroad, with preservation of Convention priority, at minimum initial expense. After a search or patentability investigation in a major country or a search by the IIB in the Hague, the applicant could decide at leisure whether to proceed or not. The probability is that only sound inventions would be proceeded with and that dubious ones would be abandoned. Thus foreign examining offices would have to examine only a part of the notified applications and to this extent would have their backlog reduced, and would also have a search report available to help them. The non-examining offices would not need to grant patents until requested. The applicant's expenses for filing and translation charges would be incurred only when actually necessary.

This system could be associated with useful record-keeping by BIRPI of all published applications and patents on the same invention. It would also be an incentive for all missing countries to join the International Convention and then participate in the benefits of the Special Arrangement.

According to all these proposals, for the examining patent offices there would be no duplication of identical searching, and useful information would be exchanged. Only inventions with reasonable

prospects would normally be proceeded with. No international bureaucracy or supranational patent office would be involved. For applicants, foreign expenses for an unsuccessful invention or one anticipated by the prior art would be kept to a minimum.

In addition to such simple Special Arrangements of this type under the International Convention, as alternatives to the complex PCT proposal, the merits of deferred examination and patents of confirmation on an international scale should also be considered, in order to render supplementary flexible assistance to the alleviation of the basic problems provided by such simple Special Arrangements. No incompatibility is involved. Such consideration might be through international commissions sponsored by BIRPI and each might produce further new Special Arrangements.

It is peculiar that the patent of confirmation concept, at present largely confined to the Latin American countries, has not taken hold generally. Actually it is a most useful device to minimize initial expense and to obtain foreign patent protection only if an invention becomes successful after an extended period of years or if interested licensees appear. The confirmation procedure means that an application corresponding to an issued patent in one country is filed in another country and the normal bar of identical prior publication is waived provided there has been no prior use. Obviously the patentee in the original country must be prepared to face the risk that third parties may usurp his rights abroad by prior use. Therefore it is not as safe as procedures under the suggested Special Agreements. Possibly, to encourage development of useful inventions, third parties might be permitted to file patents of confirmation applications in foreign countries if the original patentee had not taken advantage of his opportunity within say seven years.

THE PROPOSED CONVENTION TO ESTABLISH A WORLD INDUSTRIAL PROPERTY ORGANIZATION (WIPO)

The present BIRPI Bureau in Geneva, replacing a previous Bureau in Berne, looks after the affairs of the Paris Union (that is, the International Convention), the Berne Copyright Union, and four special Unions dealing with international registration of trademarks, designs, appellations of origin and classification. At present, the United States belongs only to the International Convention which is by far the most important by virtue of the right of priority it conveys. The BIRPI Bureau is functional and efficient. Apart from

the Madrid Arrangement for trademarks, its daily work is mainly supervisory and informational, and not executive.

Since the origin of the International Convention, the Bureau has been supervised very mildly by Switzerland, the host country. The financial contributions of member States can be altered only by unanimous consent. Actually, at the present time BIRPI is partly supported by voluntary contributions from the major countries. This is an anomalous relic from the past and should be corrected to enable its expenses to be properly budgeted.

In recent years, the operations of BIRPI have been revitalized under the regime of the present Director, Professor Bodenhausen. However, the administrative and structural reform he has sponsored in the WIPO Convention, which is approved by the State Department, is of a somewhat grandiose character. It would change what was intended to be a service agency into a new organization having the beginnings of international executive powers.

The new organization is intended to serve two purposes: one to constitute the framework of a coordinated administration for the various Unions; the other to constitute a framework for the general promotion of the protection of intellectual property throughout the world. There would be a General Assembly for full members, a Conference for full and associate members, a Coordination Committee and a new International Bureau.

The draft text of the WIPO Convention was not available until about September 1966. It was extremely difficult for all interested organizations to study this proposal in detail, or to consider its desirability as a whole, before the Stockholm Revision Conference took place in July 1967. Many suggestions from the observers present were indeed incorporated in the final text, but the general form and framework remained unchanged and those who approved it were essentially government officials. Although the WIPO Convention is ready for ratification (and in fact has been ratified by Ireland), there is no real proof that industry or the patent profession in any country consider the Convention to be needed or desirable. None of the usual organizations in the U. S. are reported to be in favor up to now.

The International Convention has been one of the world's most successful treaties for over 80 years largely due to the work of the International Association for the Protection of Industrial Property, known as AIPPI, composed of national groups of volunteers representing the private sector. The impulse for a series of organic revisions in the Convention has largely come from AIPPI according

to changing industrial needs. It has been a happy, informal relationship.

However, under the WIPO Treaty, the initiative for change would clearly pass into the hands of the Director and the government delegates, and AIPPI would be relegated to the status of a mere observer. In fact, under Article 6(2) (IX), even the admission of AIPPI would be within the discretion of the Assembly. The present cooperative attitude of the officials involved is not any permanent guarantee. Since the United States is by far the largest single user of the Convention privilege for international filings, it has a vital interest in the future integrity of the International Convention. It has been urged that WIPO would give legal status to AIPPI. But this is cold comfort for clipping its wings. *De facto* AIPPI has been highly effective from its nonlegal base.

The drafters of WIPO clearly have plans for the future—still another step along the road to a universal patent. Article 4(iii) of the WIPO Convention states that it “may agree to assume, or participate in, the administration of any other international agreement.” Here is an invitation to bureaucratic growth, and, in fact, an argument that PCT has a future home waiting.

One argument the State Department uses is that the WIPO Assembly and Conference would take industrial property matters out of the hands of the United Nations and provide a new forum for the developing nations where they could discuss their problems and receive help from “experts.”

There is no evidence whatever that this is needed. To consider a few examples: Thailand and Ethiopia are independent kingdoms without patent laws, but they are not unsophisticated. The former has had various draft patent laws pending for nearly 30 years. They can both obtain foreign capital when needed without any pressure to provide patent rights. They are aware that the Model Law prepared by BIRPI is available. But they are simply not interested at the present time. The three East African states keep that relic of colonialism: registration of British patents. However, patent rights are of little significance in economies that are still essentially agricultural. These countries also are aware of the Model Law and have discussed the possibility of a joint law and administration. They will proceed when they are ready. Most of the other developing countries already have adequate registration systems, and the need for anything different is far off.

Elaborate meetings every three years may be of interest to a few

fortunate officials from developing countries, but discussion of industrial property in Geneva would not close technological gaps or promote trade. However, political aspects might creep in with unforeseen results. There is no doubt that developing countries of all types, even when aligned with the West, tend to regard patent laws as capitalistic or imperialistic devices. The tyranny of the weak can be highly effective and dangerous. It should not be forgotten that the United States would have only a single vote. What can happen to an international forum producing words not deeds is illustrated by UNCTAD, as reported in *Newsweek*, October 30, 1967, page 38.^{24a}

After three months of conclave, 122 countries produced a series of ringing manifestos . . . calling for a global redistribution of wealth. UNCTAD (United Nations Conference on Trade and Development) . . . was turned into a permanent institution, and now has a staff of some 200 experts. It spawned a plethora of committees, sub-committees, working parties and expert groups that have been meeting daily ever since, churning out millions of words. . . . But despite all this, the developed countries are yet to take a single positive step in the direction of UNCTAD's recommendation.

The interest of the U. S. in the developing countries has and is being expressed in other directions. But in the field of industrial property, the needs and requirements of the large industrialized countries are completely different from those of the smaller countries and always will be. Therefore, although adherence to WIPO might actually turn out to be harmless for the U. S., it is difficult to see what practical advantages there would be for us, and there would always be the lurking danger that the vital International Convention might be changed to our detriment.

THE ALTERNATIVES TO WIPO

The present troubles of BIRPI could be readily cured without anything equivalent to the WIPO Convention. It would only be necessary to promulgate a far less ambitious Convention establishing an Assembly of member States, to replace Switzerland, with powers limited to BIRPI's finances and the general present scope of its limited but efficient activities as a service agency. Meetings of the Assembly every two or three years should be adequate. Since the half

^{24a} See also *New York Times*, March 8, 1968, page 10, article headed "Political Battles of 132 Nations Hamper U.N. Trade Conference" with dateline New Delhi, March 7. This begins:

At least as much time, energy and words have been expended on politics as on economics at the second United Nations Conference on Trade and Development, which concluded its fifth week of deliberations here today.

dozen or so major nations pay the lion's share in any event, some of the smaller nations might be willing to delegate their votes when no burning questions were involved.

This would enable BIRPI to remain independent of control by government officials, but to continue blossoming in the informational and educational fields, as it has been doing so effectively in recent years, while maintaining the informal but effective and benign influence of AIPPI.

There would be nothing to prevent BIRPI from summoning and hosting convocations at any time, including representatives of developing countries and non-member states, but without the formal and elaborate framework of the proposed WIPO Convention.

THE U.S. PATENT REFORM ACT

The development of "modern" patent laws (as distinguished from earlier "monopolies") did not begin anywhere until the end of the 18th Century, and the United States was one of the first to enact such a modern law. From 1793 to 1839 patents were awarded on a first-to-file system comparable to the systems of England and Europe. The Patent Act of 1839, on which the present statute is essentially based, was intended to be a liberalization to assist inventors; it awards patents to the first inventor and provides for a year's grace period before filing, during which publication and use are harmless.

Many committees of many associations prepared reports²⁵ which were submitted to the President's Commission. Even the most liberal of these reports recommended a middle-of-the-road approach to changes, in view of nearly 130 years of legislative and judicial experience with the present system. However, the *Report* of the President's Commission and the Patent Reform Act, in the form of the identical Senate Bill S.1042 and House Bill H.R.5924, propose a fundamental switch to a first-to-file system of the British-European type.

The Patent Bar has been relatively slow to react, since it has been accused in the past of mere conservative opposition to change. However it has now become clear that the overwhelming majority of U. S. patent lawyers and their clients in industry genuinely believe our system to be the best and superior in results to foreign systems.²⁶

²⁵ See "Report of Special Committee to Study the Patent System," *American Patent Law Association Bulletin* (December 1965), pp. 577-623.

²⁶ "President's Commission on Patents," by Paul H. Blaustein. *American Bar Association Journal*, Vol. 53 (October 1967).

The expression of this sentiment culminated in 1967 in an alternative Bill S.2597 sponsored by Senator Dirksen, approved by the Patent Section of the American Bar Association. This Bill retains the unique distinguishing features of our system, but introduces improvements and simplifications. In introducing his Bill Senator Dirksen said it modernizes the patent system without sacrificing basic principle "solely for the sake of international standardization of inferior patent systems used in other countries." Other alternative bills have also been introduced.

In a recent address to the American Patent Law Association in January 1968, the new Assistant Secretary of Commerce, John F. Kincaid, indicated that the Commerce Department, and by inference the State Department, had sharply modified their views and now favor compromises which in effect restore many of the controversial issues to the status quo. This is undoubtedly a shrewd assessment of the temper of the opposition. However if the policy aim remains fixed on the universal patent, it may be a case of *reculer pour mieux sauter*, and further battles may be ahead for the U. S. patent system.

TECHNICAL ISSUES AND THE CONGRESSIONAL DILEMMA

In the year 1968, one hundred senators and some five hundred representatives will oversee the vast operations of the United States, involving well over a hundred billion dollars in money and uncountable human problems here and abroad. How can they possibly find time to acquire the necessary knowledge to evaluate specific technical issues, such as those embodied in WIPO, PCT, and the Patent Reform Act? To a legislator immersed in Congressional business, these might well appear simple, harmless and even admirable, and therefore to be disposed of with a brief "yea."

The problem is probingly reviewed in a trenchant article in a recent issue of *SCIENCE* entitled "How May Congress Learn?"²⁷ The author says:

Legislatures, at the present time, rely primarily on three sources for their information: the executive, partisans (interest groups), and unaffiliated experts. Of these, the executive seems to provide by far the largest amounts of facts *and* interpretations. And for each fact and interpretation thus supplied which Congress is capable of challenging, scores of others (some of which often provide the context for the one challenged) go unchallenged. . . . The net result is the partial "blinding" of Congress and, in my judgment, the increasing

²⁷ "How May Congress Learn?" by Amitai Etzioni, *SCIENCE*, Vol. 159, No. 3811 (January 12, 1968), p. 170.

exclusion of the executive's work from democratic supervision. It may be argued that in an age of mass information, the "rule" of the expert is inevitable, and that it is just as well that politicians are kept from interfering in administrative processes. Making Congress more effective, it may be said, is making the conservative forces of society more powerful. However, the basis of the problem is that intensive and encompassing societal action requires societal backing (or consensus) if it is not to be alienating or prohibitively expensive. In the past, the national legislature was a major source of this consensus. Now, since legislatures are provided with insufficient information (while the scope of societal activities is steadily augmenting), their capacity to act effectively is declining. Lack of consensus is a major barrier.

This applies very specifically to the present situation. Up to now, industrial property has been created and controlled by the private sector. Patent laws, and international treaties and conventions, have been enacted by legislatures in accordance with the desires and pressures of industry. Industrial property is one of the most successful progeny of the technological revolution in the last two centuries. It is highly sensitive to the ebb and flow of the world's economic and financial tides, but it remains aloof. In fact, it involves a very personal aspect of the private sector: a patent can be negated by faulty disclosure; a trademark can be destroyed by misuse; a license agreement is at the mercy of its drafter.

Now the initiative for international and domestic legislation in this field has come from the State Department. Where can Congress turn for a realistic consensus? Who are the "experts"?

Government officials, however well-intentioned, in general have only superficial acquaintance with the actual operation of the delicate machinery that gives form and day-to-day substance to industrial property rights. On the other hand, to select a random example from the private sector, the Patent Section of the Texas Bar Association produced a most detailed and impartial analysis of the first draft of PCT, indicating that several hundred expensive steps among the various parties involved might theoretically be required before an applicant could convert a PCT "international" application into foreign patents.

What will happen if these matters are dealt with individually and separately? The WIPO Convention will probably be presented to the Senate early in 1968. If ratified by the United States and a sufficient number of other countries, a skeleton organization would then be created in Geneva, but the international officials of WIPO would have very little more actual work to do than they already have under BIRPI and the existing treaties it looks after. With WIPO estab-

lished, the pressure might mount to enact and ratify PCT in some form requiring intervention of the Geneva office between applicants and national offices, and thus put bureaucratic flesh on the bare skeleton. Then the plea might be renewed that the U. S. patent law should be amended to bring it into general conformity with foreign patent laws as another step towards the universal patent and to make PCT more effective. Finally, PCT, happily ensconced and flourishing in WIPO, might urge that national patent systems were obsolete and that the millenium of the universal patent had arrived—with supranational headquarters in Geneva.

All this is very conjectural indeed, but should not be ignored as impossible.

I submit that Congress should consider WIPO, PCT, and the Patent Reform Act as parts of a single broad issue. The legal and economic committees and subcommittees of the Senate and House have in the past produced very significant and indeed prestigious reports on industrial property which have guided Congress very efficiently.

Here is a situation in which expert advice from the private sector should be sought, both here and abroad. The aim should be to evaluate the true and rational self-interest of the United States in the field of industrial property vis-à-vis all other countries, whatever their size, history, geography or developing condition.

The machinery of Congress should be sufficiently flexible to enable a single joint Congressional committee to be established, to consider the future attitude of the United States towards international industrial property rights and to find a true consensus of viewpoints of genuine experts. The fundamental question is:

Should we become involved, if not entangled, in treaties of a new type and aim for universality, or should we remain flexibly pragmatic as regards present and future changes and our national and international interests?

CONCLUSION

In the light of the above dissertation, comprising a mixture of facts and opinions, the essential issues in this involved situation are:

- (1) The State Department appears committed to an international approach at the present time in the field of industrial property and to sponsoring steps along the road to the ultimate goal of a "universal patent" as envisaged in the *Report* of the President's

Commission.

(2) Apart from the noncontroversial matter of putting the finances of BIRPI on a more modern basis, the State Department is in favor of converting this modest, independent and very efficient office into the elaborate WIPO organization, having all the earmarks of a potential international bureaucracy and in which the United States would have merely a single vote. The integrity of the International Convention, which is of vital interest to the U. S., might be affected. Also, there is no clear evidence that foreign countries actually do desire the creation of WIPO, in spite of the result of the Stockholm meeting.

(3) The State Department stands behind the PCT proposal. The original text has indeed been severely criticized, at the Geneva meeting and elsewhere, but there is no indication as yet that basic changes will be made in the forthcoming revised text or that the very simple alternatives available are being seriously considered.

(4) The State and Commerce Departments actively supported the government bills for the U.S. Patent Reform Act. However as a result of mounting objections from the U. S. patent Bar and professional associations, it now appears that they have modified their position. Alternative bills are also on file. But the gauntlet has been thrown down, and the fundamental issue of changing the U. S. patent law into partial conformity with foreign systems—a step on the road to a universal patent—is squarely before Congress.

(5) It is desirable that Congress should find a way to review all these matters simultaneously, as parts of a single industrial property picture, to determine for the future where the best interests of the United States actually do lie.

It seems appropriate to conclude with the following quotation from the 1966-67 Report of the Carnegie Institution of Washington:

It would be difficult to find a more apposite general caveat for our time than this of exercising due care that, in embracing new and experimental courses on myriad fronts of movement with the ardor that we must, we do not at the same time discard long-tested values and long-tried adaptive courses which, if they are lost, will only have, one day, to be re-won—and probably at enormous cost.

Deferred Examination

H. GEOFFREY LYNFIELD*

INTRODUCTION

UNTIL RECENTLY IN PRACTICALLY ALL EXAMINING COUNTRIES the granting of patents followed a preliminary examination and the proceedings up to allowance or acceptance were secret. In many countries except those of the British type, it was not even possible for an outsider to find out whether a particular application had been filed. The examination as to form, novelty and subject matter was effected more or less routinely as the pressure of work in the patent offices permitted. The applicant had no control over which point in time this detailed examination began. Third party intervention was only possible in the form of an opposition after publication of the application following allowance.

These time-honored principles have now been shattered by the deferred examination system introduced in the Netherlands on January 1, 1964. Germany enacted a similar system which will go into effect

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on October 1, 1968. The French in an entirely new law enacted January 2, 1968 are also moving towards a system of deferred examination. The Australian Parliament is now considering a bill providing for deferred examination.

It is therefore timely to examine the Dutch, German, French and Australian systems in depth and to review some of the reasons which led up to their introduction and to consider the relation of these systems to the proposed European Patent Convention and the U. S. Patent Reform Bill.

BACKGROUND

The examining patent offices of the world have been struggling since the end of World War II with increasing backlogs. The number of applications is increasing steadily each year. In the Netherlands the number of applications doubled between 1947 and 1962 to an annual input of about 14,000 and the Dutch Patent Office in December 1963 had a backlog of 50,000 undisposed cases.¹ In Germany from 1957 to 1966 the number of applications rose from 53,000 to 67,000. In 1966 the German patent office only succeeded in disposing of 54,000 cases and at the end of 1966 the backlog of undisposed cases amounted to 270,000.²

This steady increase in patent filing is not necessarily due to growing domestic inventive activity but rather due to the increase in many countries of patent applications coming from abroad, which doubled in Germany during the last 10 years.

The indications are that the number of foreign applications filed in domestic patent offices will continue to increase as international trade expands. Russia and Japan, where large numbers of inventions originate still file only a very small number abroad, and it can be expected that in years to come, filing from these countries will increase.³

A further cause for the increasing backlog is increasing complexity of inventions. More and more technical literature has to be searched.

¹ C. J. de Haan, "New Procedure for the Grant of Patents in the Netherlands," *Industrial Property*, 4th year, No. 2 (1965), p. 31.

² Kurt Haertel, President of the German Patent Office, "The Effects on Industry of the Patent Reform Proposal in Federal Republic of Germany." Paper presented at the National Association of Manufacturers' Conference in Frankfurt, June 1967.

³ In 1966 a total of 105,907 patents and authorship certificates were applied for in Russia but only 368 Russians filed in Germany and 112 in the United States. In Japan there were a total of 62,962 patent applications by nationals of which 1,578 were filed in Germany and 2,479 in the United States, see *Industrial Property*, 6th year, No. 12 (December 1967), pp. 2-7.

In 1965 the search material in the German Patent Office included 7.7 million patent specifications and 1 million other technical papers.⁴

The Dutch government started to seriously examine the problem in 1954 by setting up a Commission which came out with a first report in 1956.⁵ This Commission was the first to publicize the fact that there was little point in subjecting applications of little commercial interest to the elaborate examination of the Dutch Patent Office. It was also common knowledge that many granted patents are allowed to lapse through the non-payment of renewal fees.⁶

The Dutch Commission proposed a seven-year period within which the applicant, or a third party, must initiate the novelty examination following an analysis of the statistics of patents kept in force. Both the Dutch and Germans came to the same conclusion that after six or seven years the average patent is no longer maintained because it has become technologically obsolescent or the cost of progressively increasing annuities makes the maintenance of the patent uneconomical.⁷

An analysis of the systems under consideration shows that some or all of the following six characteristics are present:

(A) Automatic publication shortly after filing; 18 months from the date of application or the Convention filing date (if claimed) seems to be the preferred period.

(B) The novelty examination is only initiated at the applicant's option or on request by a third party and on payment of a fee additional to the filing fee (novelty examination must normally be initiated within five to seven years from the filing date or the case will lapse).

(C) The examination as to patentability of the subject matter (inventive height) is not made unless the applicant has filed a further request for continued examination and has paid another fee.

(D) A third party can intervene and submit to the patent office prior art after publication under (A).

(E) Annual maintenance fees have to be paid during pendency of

⁴ 69 Blatt für P.M. & Z. (1967), p. 245.

⁵ J. B. van Benthem, Vice-President of the Dutch patent office, "Die Erfahrungen mit dem System der aufgeschobenen Prüfung in den Niederlanden," *Gewerblicher Rechtsschutz und Urheberrecht*, International Part, (December 1966), p. 617.

⁶ "Renewal Fees and Other Patent Fees in Foreign Countries," Study No. 17 of the Sub-committee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, U.S. Senate, 85th Cong., 2nd Sess., pursuant to S. Res. 236. (Washington, D.C.: G.P.O. 1958.)

⁷ Explanatory notes on the German Amendments in 69 Blatt für P.M. & Z. (1967), p. 244.

the application. Failure to pay such fees will result in abandonment.

(F) Some measure of interim protection is given the applicant against third parties who avail themselves of the invention following publication under (A).

In the detailed analysis below of the individual systems and proposals, the letters A through F are used to designate the various provisions in these laws corresponding to the above characteristics.

THE DUTCH SYSTEM

Since January 1, 1964 the following procedure has been followed. An application (specification, claims and drawings, if any) is filed in duplicate in the Dutch Patent Office in the Dutch language. In addition to the customary filing fee an extra printing fee based on the length of the case has to be paid. This fee is refundable if the application is withdrawn within 17 months after the filing or the Convention date (if claimed). Withdrawal of the application is not possible later as the application will then be automatically published.

The application has to be further accompanied by a list of corresponding foreign applications including filing dates and the patent office has to be empowered to make enquiries in these countries as to the status of the applications. (see Section 22A-2 of the Dutch Patent Law).

The patent office at this point makes a formal examination under Section 22A-5 to see whether the statutory requirements have been complied with. The applicant is given a five-month term to supply missing documents, such as the list of corresponding foreign applications which may not be available at the time of filing. Also the certified copy can be filed during this period. This sub-section provides for automatic lapsing of the application if these formalities are not complied with.

(A) A few days after the expiry of 18 months from the filing date or the Convention date (if claimed) the application is laid open to public inspection (Section 22C-1). Notice of publication is given in the *Official Gazette*. The applications will be duplicated by the patent office (on green paper) and copies can be obtained by anyone on payment of a small fee. Also available for inspection is the certified copy (in the case of Convention applications) and a photocopy of this can be readily obtained. An application can be published even earlier if the applicant so requests (Section 22C-2) but in practice this is

rarely done.

(B) At any time after filing, the applicant can file a request for novelty examination under Section 22I-1. Where the application has been laid open to public inspection any third party is entitled to file such a request. A substantial fee has to be filed with the request for examination. Only one fee has to be paid. If requests for examination are filed by both applicant and a third party, whoever files last gets a refund.

The applicant must file the request for examination within seven years from the filing date unless the request has been filed by a third party. If the request and fee is not paid within these seven years the application will automatically lapse. After his first request has been made, a novelty examination is made either by an Examiner in the patent office or by a searcher in the International Patent Institute at The Hague (IIB), which uses the search material in the patent office.⁸

As a matter of practice these novelty reports are little more than a list of pertinent prior art. Dutch patents and co-pending applications as well as foreign art may be listed. This art is not particularly applied to the claims (as for instance in a German or American action) and the Examiner gives no opinion as to the presence of inventive subject matter. If the claims are not in unity, the Examiner may confine his report to the first claim only and to the annoyance of the applicant may refuse to search the other claims unless a further fee or fees are paid. If the request has been filed by a third party, he and the applicant are notified of the search result. The "novelty report" becomes part of the file which is laid open to public inspection. Also available for inspection are any observations the applicant may wish to make in answer to the novelty report. An applicant at this point can also revise the claims and effect other amendments but is not obligated to do so. Any amendments are available for public inspection (Section 22I-7).

(C) No further action is taken by the patent office unless and until

⁸ The Institut International des Brevets was set up by International Agreement on June 6, 1947 and is available for examining patent applications submitted by member countries and gives opinions on novelty to private persons. The following countries are parties to the agreement: Belgium, France, Great Britain, Luxembourg, Monaco, Morocco, Holland, Switzerland and Turkey. Any other member of the International (Paris) Convention can join. Use of the facilities of the IIB is also contemplated under the new French law to be discussed below and by the proposed Patent Cooperation Treaty (PCT). The IIB at present has an examining staff of about 150 and it is obvious that this organization may have to be considerably enlarged in the future. Its employees are regarded as international civil servants and do not pay Dutch income tax.

the applicant, or a third party, files a request for continuation of examination together with another substantial fee. It will be noted that this is the third substantial fee which has to be paid by the applicant.

The request for continued examination has to be filed within seven years from the filing date. If the novelty report did not issue until the end of the seven-year period, a four months extension is granted for initiating the request for continued examination. It is to be noted here that the sequence: first request, novelty report, second request, has to be strictly observed. In the new German system to be discussed below, the two requests can be combined. This somewhat simplifies the German procedure but actually no saving in fees is involved.

(D) A parsimonious third party who does not wish to pay the fee for novelty report or continued examination can also submit to the patent office particulars of the prior art which is within his knowledge. This information is attached to the file, is notified to the applicant and is again available to public inspection with the rest of the file.

(E) The applicant also has to pay small annual maintenance fees to keep an application in force. This maintenance fee which does not increase in amount is due for the first time at the beginning of the third year after the application has been filed but can be paid late within six months. An application will automatically lapse for non-payment of a maintenance fee.

The traditional serious examination as regards inventive height (subject matter) and advance in the art only commences subsequent to the request for continued examination. Not until this stage of the proceedings is reached does the patent office go into the merits of the invention (the novelty report could have been made by the IIB as discussed above). It is obvious that a fair proportion of applicants by this time have had second thoughts of the value of their inventions and may decide not to go to the expense and trouble for the continued examination.

As is well known, the traditional examination of the Dutch Patent Office involves one or more official actions by the primary Examiner on the merits of the case followed by an advice to the so-called application department. The primary Examiner only makes recommendations but cannot make any decisions as to patentability. This is left to a senior official known as the "member" of the application department. The latter reviews the Examiner's recommendations and the applicant's replies thereto and sometimes after a further search gives the applicant an opportunity to be heard. No hearing is required if the primary Examiner makes an entirely favorable report and the

"member" agrees. An appeal to the appeal department of the patent office lies from an adverse decision of the application department. No further appeal is possible. The procedure before the primary Examiner and application department has not been changed under the deferred system of examination. All correspondence exchanged between the applicant and patent office after filing the request for continued examination remains secret and is not available for public inspection until the application is allowed. This is so even if the continued prosecution has been initiated by a third party. The third party thus does not participate in the prosecution before the application department.

Following allowance by the application department or the appeal department, the application is re-published in its accepted form provided the publication fee has been paid. Also available to inspection now is the correspondence between applicant and application department. An opposition can then be filed by third parties within four months from the date of publication of the fact of acceptance. An opponent can be the same party who intervened at any stage of the previous proceedings, and filed either a request for the novelty report or the request for continued examination. Oppositions are fairly rare and only 1 case in 20 is actually opposed. Post-acceptance proceedings follow the traditional course and also have not been changed under the new system of deferred examination and are not further discussed in this article.

(F) As outlined above, a system of deferred examination must be coupled with early publication and must provide some safeguard for the applicant against those who learn of the details of his invention following automatic publication. This may be as soon as six months after filing in the case of a Convention applicant. Section 43A of the amended Dutch Patent Act gives this protection. If during the period of automatic publication under the deferred system a third party makes use of the subject matter for which a patent has been applied for in a manner which would constitute an infringement of a granted patent, the applicant may cause a writ to be served on the third party to draw his attention to the subject matter of the application. If the third party does not desist within 30 days he must pay the applicant "reasonable compensation" after the patent has been granted. There is, however, no provision for starting legal proceedings until grant.

The Act does not further define what is meant by "reasonable compensation" but this presumably is at least equivalent to a reasonable license fee.

A similar provision giving interim protection is to be found in the

new German law, Section 47, and in the French law, Article 55.

Difficult questions may arise when a Dutch application under the new procedure is initially published with broad claims and a writ is issued against a potential infringer under Section 43A. If the claims are subsequently narrowed to such an extent that the activities of the third party are no longer covered by the patent it would seem reasonable that the patentee should not be entitled to compensation after grant of the patent. But is the third party entitled to damages on a counterclaim on the basis that as a result of the writ he ceased and desisted and thereby incurred irreparable harm? Similar problems are likely to arise under the proposals of Section 16 of the Australian bill discussed below. The British jurisprudence on the point may be of guidance in this connection.

THE NEW GERMAN PATENT LAW

The changes in the German Patent Law which will go into effect on October 1, 1968 have been discussed in detail elsewhere in this issue by Dr. Stephan G. Beszédes, a German patent practitioner.⁹ The German system will in fact provide for a deferred examination and the six characteristics A through F set out above are to be found in the German proposals.

(A) Under Section 24(3) of the German law, as amended, any person will be free to inspect the files of applications which have been on file for more than 18 months or if 18 months have elapsed from the Convention date. The person desiring to inspect such files can do so as a matter of right. Hitherto a person who desired to inspect a file of an allowed application had to show some legitimate interest. The right to inspect could only be refused to an actual opponent in regard to divided out or cancelled material.

The right to inspect does not automatically extend to pending applications which have not yet been allowed as of October 1, 1968. In these cases, the applicant is given six months notice which is coupled with a request to file a clean copy of the specification which is suitable for duplication purposes. The correspondence between applicant and patent office which has accumulated in the file up to October 1, 1968 will not be available to inspection where a clean copy of the specification and claims including amendments is filed. If no such clean copy is filed, the specification as originally filed will be published and all

⁹ Stephan G. Beszédes, "An Outline of Important Changes in German Patent, and Trademark Law." *IDEA*, Vol. 11, No. 4 (Winter 1967-68), p. 511.

actions and responses thereto will be laid open.

(B) The request for novelty examination is provided for in Section 28a of the amended law and, as in the Netherlands, has to be made within seven years from the date of filing. At the same time a fee has to be paid which is roughly equivalent to the Dutch fee to be paid with the request for the novelty report. The request can be filed by a third party.

Provision is made in Section 28a for the search report to be prepared by "another national, or by another international organization completely or in part as regards particular fields of technology." Under this provision the German Patent Office would be able to sub-contract the preparation of search reports to the International Patent Institute at The Hague (IIB) or the patent office might accept searches made by some other examining patent office. However, as the German search is extremely comprehensive, there is hardly an examining patent office in the world (apart from the Dutch office and IIB) whose standards come up to the German requirements. The results of an experimental exchange between the United States and German Patent Offices in this connection are of interest. The conclusion drawn in the German report is that only 60.1 percent of the material found by the U. S. Examiner in a corresponding application was used by the German Examiner.¹⁰

(C) The examination as to patentable subject matter is only made following a request from the applicant or a third party and on payment of a substantial examination fee, DM 300, (Section 28b). This fee is reduced if a search report has already been obtained. As in Holland this request for full examination has to be initiated within seven years from the filing date. Both the search report under Section 28a and full examination under Section 28b can be requested simultaneously, but no saving in fees would be achieved. In the Netherlands the second request cannot be filed until the search report on the first request has issued.

(D) Under Section 28a any person is entitled to inform the patent office of printed publications which might stand in the way of the grant of a patent. This "informer" provision enables anyone interested to help the patent office in its examination but without going to the expense of requesting a novelty report and full examination. This provision thus corresponds entirely to Section 22F in the Dutch law.

(E) The annual fees payable to maintain a patent in force are now due for the third and subsequent years and have to be paid within two

¹⁰ 69 Blatt für P.M. & Z. (1967), p. 146.

months of the due date (Section 11 [3] as amended). Under the new provisions fees become due irrespective of the stage of the examination procedure and payment of annual fees can no longer be deferred until grant.

(F) A limited provisional protection is given the applicant to protect him against unauthorized use of the invention following publication (Section 47a). This so-called provisional protection is minor and amounts to the same effect as a compulsory license.¹¹

THE NEW FRENCH PATENT LAW

An entirely new law was passed by the French Parliament on January 2, 1968.¹²

Patents (brevets d'invention) will be granted for a term of 20 years or six years from the filing date. The shorter term patents will be known as certificates of utility (certificats d'utilité) and will not be issued on inventions relating to medicines or for the methods of their preparation. The so-called special pharmaceutical patents (BSM) which had been granted since June 1, 1960 will be eliminated.

(A) All applications will be made available to the public 18 months after the filing date or 18 months after the Convention date (if claimed) and the entire file will be available for inspection (Article 17). This provision corresponds directly to Section 24(3) of the German law and Section 22C-1 of the amended Dutch law.

Article 17 of the French law also provides that the file wrapper of an application may at the option of the applicant be made public at an earlier date. Such advanced publication is also provided for in the Dutch law (Section 22[C-2]).

(B) As soon as an application has been found to comply with certain formal requirements e.g. unity, the application gives rise to the drawing up of a documentary notice of the invention (Article 19 [1]). In the absence of regulations, which presumably are in the process of being drafted, it is not clear from the wording of Article 19 precisely what is required from the applicant before such a report is made. However, the wording of sub-section 19 (3) suggests that a formal request has to be filed by the applicant within two years from the date of the application. Under the next subsection, an application will be

¹¹ Vossius/Jung, *Patent Act, Trade Mark Act, Gebrauchsmuster Act of the Federal Republic of Germany*, (Translation of German patent law as amended up to Sept. 4, 1967). (Wila Verlag: 1967), p. 21.

¹² Law No. 68-1 *Journal Officiel de la Republique Francaise*, January 3, 1968, pp. 13-18.

converted automatically into a certificate of utility if the report is not requested within a two-year period.

Article 3 (1) makes it clear that conversion into such a certificate of utility is not possible in the case of pharmaceutical inventions. In the absence of regulations it is not at present clear what will be the disposition of applications relating to the medicines and processes for their preparation if no novelty report is obtained. It is possible that such applications will lapse if the "avis documentaire" has not been furnished within the two-year period provided for in Article 19. If this is the case, we have in France also a deferred examination as far as pharmaceutical patents are concerned as the examination and granting procedure would be entirely within the applicant's control.

The novelty report (avis documentaire) will be probably prepared by the International Patent Institute at the Hague (IIB) as the French Patent Office does not at present have a properly classified collection of prior art nor the necessary technical staff.

The drawing up of the novelty report (avis documentaire) can also be requested by a third party after an application has been published.

An applicant is given an opportunity to present observations and amended claims in answer to the first novelty report (Article 20 [1]).

(C) A second report will be issued with the possibility for the applicant to reply with further observations and amended claims. The file wrapper is then made available to the public if the file has not been previously published. In the absence of regulations it is not clear from the law whether the search report is prepared automatically by the patent office or whether a special request has to be filed.

(D) A third party within a time period to be specified may submit observations on the second novelty report. This then corresponds to the "informer," Section 22F in the Dutch law and the corresponding provision in Section 28a of the German law. The applicant has the right to reply and the "avis documentaire" is then drawn up in its final form and becomes part of the record. The patent then issues.

(E) To maintain an independent patent in force, taxes must be paid annually from the filing date in France (Article 41). Overdue taxes can be paid with penalty fines up to six months from the due date.

(F) Article 55 of the new law gives the patentee protection against infringing acts subsequent to the date which the application was made public under Article 17, that is 18 months after the date of application or the Convention date, or if the file wrapper was made public earlier at the applicant's request. It would thus seem that here again as in Germany and the Netherlands, the applicant is fully protected against

anyone availing himself of the details of the invention between the laying open to public inspection during the examination procedure and the actual date of grant. The new law also provides that an infringement action cannot be started unless a novelty report (*avis documentaire*) has been obtained under Article 20 as discussed above.

THE AUSTRALIAN PATENT BILL

On November 2, 1967, a bill to amend the Australian Patents Act¹³ was introduced in the Australian House of Representatives and read for the first time. The bill had been prepared rather hurriedly. However, there will be an opportunity to fully discuss the bill when it comes up for debate during the next sitting of the Australian Parliament in March 1968. A full analysis of the Australian proposals is naturally not possible until the final text of the Act is available. A study of the present bill, however, would suggest that if the present proposals go through, characteristics A through F (except C) will be met and there will in fact be a deferred examination.

(A) All applications are already under the existing Act (Section 54A) automatically made available for public inspection 18 months after filing. Earlier publication—as soon as three months after filing can also be requested by the applicant (Section 54A-1).

(B) Under the proposed Australian amendment, examination will be effected only when a request for examination together with an examination fee (which is additional to the application fee) is made by the applicant or a third party. This request has to be made within five years from the date of application or the application will lapse. (Section 10 of the bill.)

(C) There appears to be no provision in the Australian bill for the filing of a second request, as in Germany and Holland.

(D) Provision is made for third parties to inform the patent office of prior publications which might affect the validity of the patent to be granted. This information can be supplied at any time after the application has been laid open to public inspection and up to the date of acceptance. Such art has to be taken into account by the Examiner (Section 18 of the bill.)

(E) The bill includes a new Section 47D providing for so-called "continuation fees" which will be smaller than the present renewal fees on granted patents but the intention appears to cause lapsing of an application through non-payment of such continuation fees. These

¹³ "A Bill for an Act to Amend the Patents Act 1952-1966."

continuation fees have to be paid during the five-year period in which examination has to be requested.

(F) Section 54C of the existing Act provides for damages for an infringement committed between publication and grant. If a claim as published is unduly broad and is subsequently limited by amendment, damages can only be recovered in respect of infringement of the claim restricted by amendment (Section 16 of the bill.) This provision protects the public against applications published with unduly broad claims. This principle is well established in British jurisprudence. A patentee who attempts to sue an infringer on the basis of a patent with claims which were "recklessly drawn or graspingly framed" or delays the amendment of claims after he has become aware of anticipatory matter, may be refused the right to amend and his action for recovery may fail even in respect of the smaller part of his claims which might be valid.¹⁴

THE JAPANESE PROPOSALS

Information has just been received from Japan that the Japanese Patent Office in April, 1967, submitted certain suggestions for a deferred examination and early publication system to the Council for Industrial Property. A sub-committee of this Council formulated its recommendations in January 1968 and these appear to include characteristics A, B, D and F.

(A) All applications will be laid open to public inspection 18 months after the date of the application or 18 months after the Convention date, if claimed. The name and address of the applicant, the date of the application, the title of the invention, the claims and a brief description of the drawings will be published in the *Official Gazette*. The remainder of the application papers will be available for inspection in the patent office. It is further proposed to reproduce the specification, claims and drawings on micro-film and make these available for public inspection in various libraries throughout Japan.

(B) Applicant may request examination anytime within seven years from the date of filing.

(C) It is not clear from the information so far available whether the present proposals include a request for continued examination as in Holland and Germany.

(D) A third party may submit to the patent office particulars of prior art which may affect the novelty of published applications.

¹⁴ Blanco-White, *Patents for Inventions*, Third Edition. (1962), p. 245.

(E) Information is at present not available as to whether any changes are being contemplated regarding payment of taxes. The present rules require that taxes for the first three years must be paid before grant. Taxes further are at present payable annually beginning with the third year from the date of publication of acceptance.

(F) Interim protection will be given applicants to protect them against infringers who avail themselves of the invention between the date of first publication and grant, but the compensation to be recovered, as in Germany, will be limited to a reasonable royalty.

It is understood that the Council for Industrial Property is preparing a report incorporating the above recommendations of its sub-committee for a deferred examination system and it is expected that such report will be published in April or May 1968. The patent office, in turn will prepare its own draft and make suitable recommendations to the Japanese Parliament for consideration at the next session beginning towards the end of 1968.

It is not expected that the new system will go into effect before October 1, 1969.

THE PREVIOUSLY PROPOSED EUROPEAN PATENT CONVENTION

In 1961 a Committee of Experts from the Common Market countries prepared a draft Convention for a European Patent Law.¹⁵ The intention was to establish a common law for the six countries and to grant a single patent which would cover the entire territory of the Common Market. The proposal which is now a "dead letter" was largely German-inspired and at the time received a lot of publicity but ran into serious difficulties when the other Common Market countries realized that they would have to give up a great deal of sovereignty; also the question of whether the Convention should be open to either countries remains unsolved. The European Draft Convention also provided for deferred examination. The order of (A) publication and (B) the search request however was reversed.

(A) and (B) Following filing in the European patent office or in a national office the application was first to be examined in formal respects (Article 76). The applicant then had to pay a fee additional to the filing fee with a request for a novelty report which was to be prepared by the International Patents Institute at the Hague (IIB). After payment of further fees for printing and grant, a provisional

¹⁵ "Translation of Draft Convention Relating to a European Patent Law Prepared by the British Board of Trade, London (1962)," 45 *JPOS* 182 (1963).

patent was to be granted and the entire application was published with the novelty report (Article 85).

(C) Within five years, from the date of grant of the provisional patent, its proprietor or a third party could request examination subject, of course, to the payment of another fee.

(D) It was open to any third party to file a notice of intervention within three months and such third party would then become associated in the examination proceedings (Article 91). Anyone could also present observations concerning the validity of the patent under Article 92.

(E) In addition to the various printing fees and other fees payable with practically every procedural step, the Draft Convention provided for renewal fees payable for the third and following years from the date of filing of the application (Article 119). Failure to pay any of these renewal fees would result in lapsing of the patent.

(F) Interim protection was provided by the provisional European patent from the day of publication of grant (Article 87). An action for infringement on a provisional European patent was to be brought before the national courts of the contracting States (Article 174). The validity of the provisional patent could be questioned and a decision establishing infringement had then to be deferred until confirmation into a final European patent (Article 176).

THE U.S. PATENT REFORM PROPOSALS

The *Report* of the President's Commission¹⁶ in Recommendation IX suggested that "standby statutory authority should be provided for optional deferred examination." The detailed provisions of the *Report* were incorporated in Bills S.1042 and H.R. 5924 introduced in the 90th Congress, 1st Session on February 21, 1967.¹⁷ Only three of the characteristics present in the other foreign proposals are present, namely A, B and F.

(A) Section 123 provides for publication 18 to 24 months after filing. Earlier publication may be requested by the applicant.

(B) The detailed examination of an application will not be initiated under Section 193 until a request has been filed by the applicant or a third party. This can be deferred up to five years from the filing date.

The bills before Congress do not provide for the examination to be

¹⁶ Published in Washington, D. C. (1966).

¹⁷ 49 *JPOS*, 152 (1967).

in two parts (C) and there is no provision for third party intervention (D) and the payment of annual maintenance fees (E).

(F) Interim protection between the date of publication under Section 123 and grant, is provided for in Section 273. Damages for unauthorized practice during the interim period are to be limited to "royalties reasonable under the circumstances."

Recent hearings before the Senate sub-committee on Patents, Trademarks and Copyrights headed by Senator John McClellan discloses opposition from industry to automatic publication of patent applications 18 to 24 months after filing. Commissioner Brenner also indicated that the Administration was no longer interested in pressing for the adoption of the deferred examination system.¹⁸

STATISTICS

The Dutch Patent Office has made available statistics on the working of the deferred examination system.¹⁹ More recent figures covering all pending patent applications were analyzed by the prominent Dutch patent attorney, C. M. R. Davidson.

On December 31, 1966, i.e. after three years from the entering into force of the new law, 83,447 patent applications were pending in the Dutch Patent Office. Of this amount no request for a novelty search had yet been filed in 46,021 applications i.e. 55.15%. In case of 18,760 patent applications the novelty search report had been issued; i.e. 22.48% but the second request for the further prosecution had not been filed. Consequently, of the 83,447 pending patent applications 46,021 (no novelty search requested) plus 18,760 (no further prosecution requested) = 64,781, i.e. 77.63% were alive but dormant. Under treatment were 18,666 patent applications, i.e. 23.37% of which 6,074 applications were in treatment for the novelty search report (7.28%) and 12,592 applications, i.e. 15.09% were in the further prosecution stage.²⁰

Summarizing the present experiences with the new Dutch patent law has shown:

- (1) The novelty search is requested in the first two years in approximately 40 percent of the patent applications;
- (2) In the last year of the seven-year period further requests will be made in another 25 percent;

¹⁸ *Chemical and Engineering News*, February 12, 1968, p. 32.

¹⁹ Report of the Netherlands Patent Office for the Year 1965, *Industrial Property*, 5th Year, No. 7 (August 1966), p. 197.

²⁰ C. M. R. Davidson, "Experiences with the New Dutch Patent Law," presented at the Annual Meeting of the Canadian Patent Institute on November 1, 1967.

- (3) In total novelty search requests will be filed in approximately 65 percent to 70 percent;
- (4) Saving one third of the work for novelty search;
- (5) Further prosecution is requested in the first two years in 50 percent of the examined patent applications;
- (6) In the last year of the seven-year period this amount increased to 69 percent of the examined patent applications;
- (7) The new law will bring a saving in the further prosecution of roughly 20 percent.

The situation in the Dutch Patent Office is somewhat confusing, as when the new law came into force something like 30,000 patent applications were pending and had not yet been examined.

Until July 1st, 1967, the novelty search had been requested for 45 percent of these old patent applications. It has been estimated that the total requests will amount to 55 percent of the pending patent applications. Consequently, a saving of 45 percent will be obtainable by the new law.

Mr. Davidson also points out that in Holland only 15 to 20 percent of applications originate with Dutch inventors and over 80 percent of patents are of foreign origin. It appears that the percentage of novelty requests filed in respect of applications of foreign origin was only 41 percent whilst a much higher percentage of requests were filed in respect of applications of Dutch origin (63.4 percent).

Mr. Davidson concludes that as regards further prosecution on the basis of available statistics, the second request is only filed in approximately 50 percent of applications in which a novelty report has issued.

CONCLUSIONS

A complete analysis of the Dutch deferred system is obviously not possible until it has been in operation for at least seven years. There may be a tendency for applicants to apply for novelty examination towards the end of the seven-year period in the case of applications which had been maintained that long. A substantial number of such applications maintained over a period of seven years may be examined further and it is quite possible that over a long period the substantial saving in full examination will not be realized.

Dr. C. J. de Haan, President of the Dutch Patent Office, however, is optimistic.

After three-and-a-half years of experience with the working of our new law, we are convinced that the final result of our new law in

labour saving will be greater than we even expected in preparing the law.²¹

Mr. Van Benthem, Vice President of the Dutch Patent Office and member of the government commission which prepared the law, has reached this conclusion:

The Office has to reckon with 65-70% novelty searches and 50% granting procedures (requests for continued examination) at the most, the percentages bearing relation to the number of filed patent applications. This means that *not more than half* of the applications will have to pass the granting procedure proper.²²

Deferred examination is of course extremely attractive to all examining patent offices. The proposed system is bound to relieve the strain on the examining staff. It is obvious that the number of applications to be examined will be reduced. The maintenance fees and other fees to be paid with the various requests for examination will provide for additional revenue. There is no difficulty about collecting fees. This can be done by cheap clerical help assisted by the computer.

It is not surprising then that even the British Comptroller-General, Gordon Grant, is flirting with the idea of deferred examination.

It seems inevitable that before long some radical modification of the system of examination will have to be envisaged. Already the Netherlands system has been changed so that an application is not examined until it is certain that the Applicant wish to proceed with it.²³

Actually the British Patent Office has little to worry about. In spite of an increase of the number of applications from 40,498 in 1957 to 58,471 in 1966, it has been possible to reduce the maximum permitted period for acceptance to two and three-quarter years.

Not everybody has favorably expressed himself about deferred examination. Strong contrary views have been urged by the private sector. Thus Mr. Micklethwait, a well-known British patent agent has written:

The system of deferred examination, that has been adopted in Holland, and that has been proposed for the Common Market patent and elsewhere, is a desperate remedy for the mounting arrears that have been found to occur with European examination systems.

²¹ C. J. de Haan, "The result of the Netherlands Law Constituting the Granting of Patents with Deferred Examination," a paper presented in Frankfurt at NAM Conference, June 7, 1967.

²² Van Benthem, *supra* note 5, at 623.

²³ 84th Report of the Comptroller-General for the Year 1966, p. 5.

In my own view it is a deplorable innovation designed solely for the benefit of patent offices with scant regard for the requirements of the applicant and none at all for those of the public.

The purpose of examination is to enable a member of the public to be advised with reasonable certainty what he may or may not do at the time when the patent becomes legally effective. It has been the proud boast of the supporters of the German and Dutch system that a patent is not granted until every precaution has been taken to ensure that it will be valid. It may be that, by saying that a provisional patent is not a patent, the deferred examination system pays lip service to this boast, but in actual practice it makes it a hollow mockery. Thus when a provisional patent is granted a manufacturer wishes to know what it will validly cover. In the case of the proposed Common Market patent it may well be that the claims are completely anticipated by prior specifications that have actually been cited by the Examiner, but no amendment of the claims has been made. In these circumstances one might suppose that a manufacturer would be free to ignore the patent, but in fact he must be warned that seven years later examination may be started and perhaps ten years later a patent may be granted with new claims which are valid and infringed, so that if the manufacturer has spent a large sum equipping a factory to manufacture a certain article he may then be told not merely that he must stop manufacture but that he must pay damages for all articles manufactured in the previous ten years.²⁴

A negative conclusion for much the same reason has been reached by Dr. Bardehle; a German patent agent practicing in Munich:

Each patent application published in accordance with the proposed procedure would carry with it provisional protection which could mature into a vested right under certain conditions. Such provisional patent rights would have to be respected immediately by all industrial and business circles concerned. The continuous evaluation work done by the business and industrial community at present benefits from the fact that about half the patent applications are rejected by the German Patent Office during the examination. Private enterprise accordingly need not bother with this chaff, but can devote all of its attention to the remaining half of the applications.²⁵

The publication of unexamined applications in Holland, Germany and France will result in an enormous flood of publications. These will give industry early information as to what their competitors are doing. However, such unexamined applications as pointed out by Micklethwait and Bardehle will have to be evaluated from the point of view of infringement. This has been appreciated by Dr. Kurt Haertel, the President of the German Patent Office.

²⁴ E. W. E. Micklethwait, "Deteriorating Examination," 48 *JPOS* 540 (1966).

²⁵ Heinz Bardehle, "The Novelty Examination and Deferred Examination," 48 *JPOS* 367 (1966).

If all applications will be laid open after 18 months industry will know the state of the art at an early stage as it is reflected in the filed inventions. On the other hand, industry will have to deal with a great many additional publications. As compared to 40,000 publications now issued each year by the German Patent Office, it will issue about 100,000 publications each year pursuant to the new procedure.²⁶

An American writer has suggested that perhaps too much emphasis has been placed on the reduction of the existing backlog in the U.S. Patent Office.²⁷

It has been pointed out that there is nothing new in a sizable backlog. As far back as 1848 the House of Representatives ordered the Committee on Patents to investigate the delay in examining patent applications. In 1921 the total number of applications waiting disposal was 55,969.²⁸

Michael Meller, a New York patent attorney and former Patent Office Examiner, in a comprehensive paper examining the problems of the U. S. Patent Office comes to this conclusion:

The need for adopting a delayed examination becomes greater each day because of the difficulties we are having with our present system. But even more importantly as a matter of self-protection we have to adopt it, especially when the Common Market Patent System starts operating; otherwise we will be doing the work of examining, while the Europeans will be getting the benefits of our efforts. Even if the Common Market System were to be open to American inventors, which appears to be opposed by some circles in Europe, there would be insufficient reciprocation for the burdens that would be imposed on the United States under the present laws. The time to discuss the desirability of delayed examination is now, not later, to treat the cause of the ills of the patent system as soon as possible by the adoption of the changes suggested herein, and not merely look to the symptoms and keep trying to remedy those.²⁹

Experience over the next decade will show whether the disadvantages of the deferred examination system pointed out above will outweigh its advantages, or whether deferred examination will solve the problems of the examining patent offices, at some cost to the applicant. It is possible that during this period of trial a partial solution for relieving patent office examiners can be found in com-

²⁶ Haertel, *supra* note 2.

²⁷ Robert J. Lasker, "An Analysis of the Proposed Deferred Examination System," *IDEA*, Vol. 11, No. 3 (Fall 1967), p. 420.

²⁸ John R. Duncan, "The European Patent Convention As a Guide to Modernizing Our Patent Examining System," *IDEA*, Vol. 8, No. 3 (Fall 1964), p. 405.

²⁹ Michael N. Meller, "Treating the Cause and Not the Symptoms," 46 *JPOS* 247, (1964).

puterized searching but it seems unrealistic to expect that a computer will ever be able to judge inventive height and advance in the art.

However it is most important to remember the *voluntary* aspect of deferred examination. Applicants and third parties can always start the examination procedure into operation. If this is done immediately after filing, there is no deferral at all. This flexibility is a strong argument in favor of deferred examination.

APPENDIX

STATISTICS SUPPLIED BY THE DUTCH PATENT OFFICE

These figures show the filing of requests for a novelty report (RNR) and for the continuation of the granting procedure (RCGP) up to February 1, 1968, corrected by subtracting those requests which have been withdrawn or abandoned.

TABLE 1
NUMBER OF UNTREATED PATENT APPLICATIONS ON JANUARY 1, 1964: 30,092

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1964	10083	33.5%			1912	6.4%		
1965	1810	6.0%			2072	6.9%		
1966	1082	3.6%			1452	4.8%		
1967	1068	3.5%			1165	3.9%		
Jan. 1968	205	0.7%			101	0.3%		
TOTAL	14248	47.3%			6702	22.3%		
1964-1967			5749	19.1%			1983	6.6%

TABLE 2
NUMBER OF PATENT APPLICATIONS BEING TREATED BUT NOT YET SENT ON WITH AN ADVICE, PENDING ON JANUARY 1, 1964: 17,709

YEAR	RCGP		Withdrawn or abandoned without RCGP	
1964	5749	32.5%		
1965	1157	6.5%		
1966	1259	7.1%		
1967	1209	6.8%		
Jan. 1968	107	0.6%		
TOTAL	9481	53.5%		
1964-1967			5435	30.7%

TABLE 3
NUMBER OF PATENT APPLICATIONS FILED IN 1964
In Total: 15,355

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1964	4297	28.0%			91	0.6%		
1965	1179	7.6%			927	6.0%		
1966	652	4.3%			1013	6.6%		
1967	335	2.2%			563	3.7%		
Jan. 1968	68	0.4%			29	0.2%		
TOTAL	6531	42.5%			2623	17.1%		
1964-1967			1593	10.4%			972	6.3%

Of Dutch Origin: 2,149

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1964	1170	54.4%			17	0.8%		
1965	167	7.8%			175	8.1%		
1966	29	1.3%			70	3.3%		
1967	19	0.9%			44	2.0%		
Jan. 1968	—	—			4	0.2%		
TOTAL	1385	64.4%			310	14.4%		
1964-1967			288	13.4%			366	17.0%

TABLE 4
NUMBER OF PATENT APPLICATIONS FILED IN 1965
In Total: 17,284

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1965	4789	27.7%			57	0.3%		
1966	1141	6.6%			919	5.4%		
1967	758	4.4%			929	5.4%		
Jan. 1968	85	0.5%			57	0.3%		
TOTAL	6773	39.2%			1962	11.4%		
1965-1967			766	4.4%			568	3.3%

Of Dutch Origin: 2,505

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1965	1363	54.4%			18	0.7%		
1966	184	7.3%			169	6.7%		
1967	41	1.6%			73	2.9%		
Jan. 1968	2	0.2%			6	0.3%		
TOTAL	1590	63.5%			266	10.6%		
1965-1967			140	5.6%			268	10.7%

TABLE 5
NUMBER OF PATENT APPLICATIONS FILED IN 1966
In Total: 18,489

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1966	5172	28.0%			51	0.3%		
1967	1104	6.0%			986	5.3%		
Jan. 1968	139	0.7%			105	0.6%		
TOTAL	6415	34.7%			1142	6.2%		
1966-1967			240	1.3%			192	1.0%

Of Dutch Origin: 2,592

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1966	1520	58.6%			20	0.8%		
1967	164	6.3%			165	6.4%		
Jan. 1968	2	0.1%			5	0.1%		
TOTAL	1686	65.0%			190	7.3%		
1966-1967			47	1.8%			107	4.1%

TABLE 6
NUMBER OF PATENT APPLICATIONS FILED IN 1967
In Total: 17,892

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1967	5138	28.7%	65	0.4%	85	0.5%	22	0.1%
Jan. 1968	299	1.7%			36	0.2%		
TOTAL	5437	30.4%			121	0.7%		

Of Dutch Origin: 2,491

YEAR	RNR		Withdrawn or abandoned without RNR		RCGP		Withdrawn or abandoned without RCGP	
1967	1542	61.9%	8	0.3%	22	0.9%	12	0.5%
Jan. 1968	32	1.3%			4	0.1%		
TOTAL	1574	63.2%			26	1.0%		

TABLE 7

Number of communications sent about the result of the novelty examination:

RCGP received	1964		1965		1966		1967		January 1968
YEAR	8137		7694		7609		7921		728
1964	2016	24.8%							
1965	1585	19.5%	1511	19.6%					
1966	464	5.7%	1433	18.6%	1555	20.4%			
1967	297	3.7%	542	7.0%	1434	18.8%	1465	18.5%	
Jan. 1968	25	0.2%	31	0.5%	44	0.7%	219	2.8%	9 1.2%
TOTAL	4387	53.9%	3517	45.7%	3033	39.9%	1684	21.3%	9 1.2%

TABLE 8

NUMBER OF PATENT APPLICATIONS FILED IN JANUARY 1968

In Total: 1,444

YEAR	RNR		RCGP	
January 1968	233	16.1%	—	—

Of Dutch Origin: 77

	RNR		RCGP	
January 1968	77	1.1%	—	—

TABLE 9
NUMBER OF PATENT APPLICATIONS TREATED PARTIALLY ON JANUARY 1, 1964 (NOVELTY REPORT ALREADY WRITTEN)
WHICH PASSED THE PERIOD OF SEVEN YEARS (SECTION 22K PATENTS ACT) IN THE PERIODS STATED BELOW

Year	Sum total of both columns I	Procedure continued with an RCGP			Withdrawn or abandoned without RCGP		
		I	II	III	I	II	III
		In total	More than 3 months before the end of the 7 years' term	Within 3 months before the end of the 7 years' term	In total	Before the end of the 7 years' term	Abandoned on account of expiry of the 7 years' term
1966	3499	2429	1899	530	1070	648	422
1967	4518	3012	2455	557	1506	990	516
Jan. 1968	394	277	228	49	117	84	33
		70.3%	57.9%	12.4%	29.7%	21.3%	8.4%
Total	8411	5718	4582	1136	2693	1722	971
		68.0%	54.5%	13.5%	32.0%	20.5%	11.5%

A Critique of Deferred Examination

TOM ARNOLD*

INTRODUCTION

THE FIRST QUESTION TO CONSIDER in connection with deferred examination, as with any proposed revision to the patent law, is that derived from the Constitutional purpose of the patent system:

Does deferred examination serve any of the purposes of the patent system in promoting the progress of the useful arts or the availability of new progress to the public?

The answer to this first required question is a clear and affirmative, No.

The most glowing allegations of alleged value of deferred examination never speak in terms of competitive research, market development, or the like.

The nearest thing to the Constitutional purpose that is ever referred to by champions of deferred examination is one of its necessary appendages—publication prior to examination of the application. The advantages of such publication are readily apparent and need not be here reiterated. But let us look for a moment at the mischief such publication will work.

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PUBLICATION OF ALL APPLICATIONS FOR PATENT PRIOR TO EXAMINATION

Let's look briefly at the inequity, the cost in time and the cost in money, of blanket publication of all patent applications without editing of any sort for merit.

When we publish applications for patent without examination for merit by either a patent Examiner or by an editor of a technical journal, we publish paper which in majority part is trash to our technical literature with no value in return for the trash effort.

By S.1042, we publish all the non-meritorious applications for patent, surely 40 percent or more. And we publish twice at least, all the meritorious applications—and one of the two such publications is trash in our technical literature. In fact it seems inherent in S.1042 that not only will the applications be published, but abstracts of them will be published in a manner similar to present *Official Gazette* publication of issued patents, and that upon final issuance of patents such abstracts must be published again. Thus in part we are likely to have four largely redundant publications of the meritorious subject matter under S.1042.

The very existence of these trash publications forces hundreds of college level brains all over the country to read them. At least one college level man in every major patent law office or corporate patent department in the country, on average, will have a pressure to read or scan all the trash. If his time is worth, say \$20 per hour (most of the readers will be worth more than that), the total cost to industry and law firms will be great indeed.

The very existence of these trash publications forces a mailing expense to mail them to libraries, law offices and corporate patent departments.

The very existence of these trash publications forces storage of copies of them not only in the Patent Office, but in law offices, corporation offices and libraries around the world.

The very existence of these trash publications forces educated people to classify and index the trash for appropriate retrieval when needed—if ever.

At a time of a natural-occurring paper explosion of nitro-glycerine proportions, this trash publication of forced volume exceeding 100,000 patent applications (or abstracts thereof) annually is adding TNT to the explosive event.

Is this publication necessary?

Let us assume that it is done for say five years, and then some bright economist totals up all the cost to society as a whole—not just

printing cost to the Patent Office—and finds the total cost high. Then he comes along with a fresh new idea. Being a fresh new idea, it will appeal to those who love change for the sake of change and without regard to true cost.

The fresh new idea: To hire a bunch of editors; give them 20 hours to examine each application so as to edit out the trash; thereby to eliminate 95 percent of the trash publications.

At 20 editing hours per application, this editing job can be done within 18 months of the filing date of the applications at a total cost to society of less than the cost of publishing the trash, mailing the trash, reading the trash, classifying the trash, indexing the trash, storing the trash, retrieving the trash.

But can such editors do the editing job in only 20 man-hours per application disposal? Patent Examiners do it now in only 15½ man-hours per application disposed of.

By issuing (and then publishing) patents on interfering applications with "conditional claims" as to the interfering subject matter in the junior party's patent and then fighting the interference after patent issuance; and by issuing patents that are on appeal to the courts with the appealed claims conditionally appearing therein; 90 percent of all allowable applications for patent can be published AFTER examination for merit and allowance and still within 24 months of the filing date. The Patent Office is almost doing that now, excepting only a relatively few arts where the Patent Office is short on personnel.

Since publication after allowance of material already edited for merit is feasible within the same order of time as the 24 months of S.1042 publication, the multiple pre-allowance publications are not necessary or desirable.

So much for publication. What else does deferred examination force upon the system?

IS THE CURE FOR INVOLUNTARY DEFERRED EXAMINATION, THE ESTABLISHMENT OF VOLUNTARY DEFERRED EXAMINATION?

With all interferences and appeals fought to conclusion before issuance and publication as at present, we suffer an average two and a half years of involuntary deferred examination, which industry and Bar alike curse for its many evils.

The deferred examination of S.1042 adds a five-year voluntary deferred examination bringing the total to seven and a half years.

Query: Is the cure for the muchly-cursed involuntary deferred examination, the establishment of a seven and a half year voluntary deferred examination? Clearly, no.

Why do I speak of two and a half years *plus* five years?

Over the past quarter century, the United States Congress, the patent Bar and industry have tolerated an average application pendency time of nearly three and a half years, now down to two and a half years. Are any of the socio-economic or political pressures that resulted in such tolerance going to be changed by deferred examination? I think not. Deferred examination *in the United States* is not going to change the pressure on Congress, the patent Bar, industry, or the Bureau of the Budget. Examination time will, under deferred examination after a shake-out period, still run to however many years we tolerate, and history teaches us we tolerate on the order of two to three and a half years.

Patent Office budget is a *de minimis* tail on the dog of the nation's total research budget—something like .07 percent. So small a tail must not be permitted to wag the dog.

Deferred examination is not going to change the Patent Office capacity to compete with industry in the employment of men familiar with this or that technical art. Patent Office personnel management will not be changed by deferred examination. The pressures on Patent Office personnel will remain the same under deferred examination as now. Only a change in Patent Office budget relative to its work-load and some capital investment in mechanized data retrieval will change the Patent Office examination backlog.

For many strong reasons there is no time here to discuss, it is reasonably predicted that under S.1042's deferred examination, examining time will go up from the present two and a half years rather than down—thus effecting seven and a half years of deferred examination.

As a starter on evidence of this thought, consider this: In Holland 80 percent of all applications for patent are foreign applications. Essentially all these foreign applications are, under Holland's deferred system, examined abroad before the choice must be made to examine in Holland. Even so, the total work-load on the Dutch patent office (not counting industry, libraries, et cetera) seems to be reduced by only a moderate amount by comparison with its non-deferred examination. And other independent mischief is at least rumored to have set in on the Dutch patent office as a result of the deferred examination effort.

Contrast the United States where nearly 80 percent of the applications are domestic and where only 1 percent of the applications are expected to be examined abroad before deferred examination here.

The Dutch pilot plant operation when viewed in the context of United States facts and economic premises, many of which differ sharply from Dutch economic premises, proves conclusively that deferred examination will *not*—after a shake-out period—reduce examination time in the United States.

Rather, S.1042's deferred examination, is five years *plus* otherwise routine examination time which is now two and a half years, or a total of seven and a half years.

But what is so wrong about this lengthy deference if the applications are published after 24 months?

DEFERRED EXAMINATION IS A REGISTRATION SYSTEM FOR THE MOST CRITICAL 35 PERCENT OF PATENT LIFE

During deferred examination for about seven and a half years, the applicant has only registered his claim for a patent.

No cases will be finally rejected. Applicants will not have been forced to quitclaim some subject matter in order to avoid references. Multiple applications on the same invention that under Title 35 U. S. C. would be shaken out in an interference will all be published, each with a slightly different disclosure and a possibility of eventually winning allowance of at least some narrow claims by the Patent Office, and also of winning some uncertain range of equivalents thereto in the courts.

The present United States system requires the applicant to distinctly point out and claim his invention. That which is disclosed but not claimed is dedicated to the public normally within two and a half years on the average. In addition the Patent Office examines the claims and rejects that which is obvious to the Examiner from the prior art known to him after his search. These two procedures, dedication by non-claiming and rejection over prior art found by the Examiner, greatly cut down on the area of uncertainty of scope of issued patents by comparison with pending applications.

In context of competitive new product design or new plant design, these two restrictive procedures give information to the designer as to which roads of progressive design are free roads and which are toll roads on which some patentee may extract a toll.

Under S.1042 deferred examination, with aid of preliminary appli-

cations, it is certain that the infringement searcher will have at least the same order of magnitude of unpublished applications (both preliminary and young complete applications) as we have at present—i.e. an estimated more than 200,000 preliminary applications per year plus a year's worth of complete applications. And to these applications, all still noses-of-putty, must be added five or six years of published applications not yet examined, that also are still noses-of-putty, whose coverage still remains uncertain, unknown and unfrozen.

Licenses must, in a great majority of cases, be negotiated in the registration system period, the first seven and a half years. The licensee must resolve doubts in favor of the potential patent or risk a million dollars in new plant or development. So he pays tribute for 35 percent of the potential patent life for a license under a no-patent that often will never become one.

Those who negotiate a license each month or so will know that this problem is real and present, though of course not universal, even under present two and a half years involuntary deferred examination.

Voluntary seven and a half years deferred examination compounds the problem on a curve exponentially upward with time without any real promise of significant value in return.

As of now, many many lawyers draw most of their licenses of pending applications around the subsisting claim concept: I.e., royalties are tied to the scope of claims in either a patent application or patent so long as the claim is not under final rejection, canceled, disclaimed, awarded to another in an interference or held invalid in court. As of now it is feasible to depend upon final rejection of trash claims within two or three years; and this is a reasonable time to pay royalties even on unpatentable subject matter just as compensation for know-how or market-lead time afforded by the alleged inventor's disclosure.

Under deferred examination the inventor doesn't want to define his invention finally until after market development by his competitors. So he may require in the license contract, "No examination till I say so." And the potential licensee who is trying to buy peace and security for his million dollar plant or marketing investment is burdened to accept it—with the result that the trash claims are not examined and are not finally rejected for seven years, or eight.

Thus, under deferred examination, licensees will often pay royalties under trash claims that are only registered for non-coverage by non-patents for six, seven or eight years.

Another point. Under Title 35 today, if a company finds it is

infringing a patent claim, the first effort is to attempt to design around the claim and accomplish the commercial result with an alternative specie not claimed in the patent. But if the company is infringing a deferred application's claims and successfully designs around them, the applicant (who is not yet bound to his claim pattern) can often amend his claims to be generic to the design-around effort.

Note that under S.1042 the applicant is not bound to his claim pattern during 35 percent of patent life even though he can recover damages under some after-notice circumstances for a period of time prior to allowance of his patent.

Yes, we have in deferred examination all the comforts, but more important *the mischief*, of a seven to eight year registration system.

THE CONCEPT OF BROADENED REISSUE PATENTS

Under present Title 35, if an applicant or his attorney erroneously claim an invention too narrowly, the applicant may correct the error by reissuing the patent and claiming more broadly—provided (a) the broadening correction is made within two years of the original patent issue, and (b) the broadened subject matter of the patent may not be asserted against an infringement that occurred before issue of the broadened subject matter in the reissue patent—this latter rule being referred to as the “intervening rights” of the infringing competitor.

The concept of broadened reissue patents, by way of correction of errors which sterilize a patent into a nullity, was condemned by the President's Commission on the Patent System and by S.1042, even in the presence of its two protections (a) and (b) above.

But deferred examination forces a freedom to broaden coverage not just for a few years, but for six, seven or eight years—during which competitors are plagued *without* benefit of “intervening rights.”

Let's illustrate by way of actual examples that have come to pass under the two and a half year present involuntary deferred examination, that deferred examination compounds with five more years.

I recently came to know a competitor's marketplace structure before my client's patent claims were frozen by allowance of the patent or by intervening rights. Narrow “picture” claims of certain validity were added to the patent before it issued that read specifically on the competitive structure. Thus we enjoyed the benefits of “reissue” to support an infringement suit argument of slavish dupli-

cation of even immaterial details, greatly enhancing the strength of the potential infringement suit.

In another case Company X had \$250,000 worth of tools in the field before the competitor took one of these tools to his patent attorney who was prosecuting an application. The competitor's patent application then stood finally rejected with no claims allowed and no claims present in the case that read upon Company X's specie of the invention. New claims very specific to Company X's structure were added. A big commercial success story was told, based in part on Company X's commercial success. The claims were allowed, suit for infringement was filed and judgment went for Plaintiff—broadened "reissue" without the protections of intervening rights for the party whose commercial success produced issuance of the patent.

Deferred examination's extra five years compounds this vital and critical evil, many fold.

DEFERRED EXAMINATION WILL INDUCE THE FILING OF MANY QUESTIONABLE APPLICATIONS

Under the system of present Title 35 U. S. C., lawyers have on rare occasion advised a client to brainstorm every conceivable idea in a new art and to file dozens of applications with a few broad claims in each, then let the industry develop the art for a couple of years before electing which were worth prosecuting. While small businesses can rarely afford the practice, big business often can afford it.

Under deferred examination with bushes to hide in for seven or eight years while competitors develop their products and their market, this practice will be recommended much more often to big business that can afford this practice.

The published art will thereby be flooded with more trash applications with which big business can hide in the bushes.

And these trash applications, pursuant to S.1042, will join the mass of trash publications that must inherently be classified relatively poorly and that an infringement searcher must consider when advising as to new plant or new product design.

The cure for this is more promptness, not more deference, of examination.

In order to avoid the uncertainty of hundreds of thousands of unexamined applications, above and beyond those we now suffer, new products and plants must be biased toward structures which can be "justified by the prior art," i.e. be like the prior art so that no

patent that later issues on them can be held valid over the prior art that was copied.

This is a bias not toward progress in the useful arts, not toward new design; it is bias toward copying old design, i.e., bias toward stagnation of progressive, new design.

COMPETITOR'S RIGHT TO REQUEST EXAMINATION

S.1042 provides that for a fee a competitor may, if he desires, request the examination of an application even though the applicant has not so requested.

It seems that a competitor has enough reading to do in the art without having to read all of his competitor's trash applications and select which ones he wishes to pay a fee to get examined. In truth, it likely is cheaper for him to pay a patent Examiner, through taxes, to sift out the trash applications before he starts his reading of his competitor's patents.

But another thought is perhaps more important.

Suppose a first competitor does learn of an offensive application by a second competitor and pays the examination fee. The second competitor is thereby advised that somebody wants to infringe this potential patent that he might otherwise have abandoned, and he will focus special legal talent to aggressive prosecution of that application and to further research in the area to cover all alternative ideas. So first competitor pays the fee by which the second competitor focuses his attention to hurt the first competitor's business. Equitable?

More important, the first competitor is still blocked from his new plant or product. It will take two years or more after he pays the examination fee on his competitor's application before the examination is completed. So what does the first competitor do about capital commitment for *this* year's market or for *next* year's market.

"Stagnate the useful arts" is a meaningful phrase in describing the mischiefs of deferred examination.

PUBLIC RESOURCES SPENT IN EXAMINATION OF WORTHLESS APPLICATIONS

It is argued by some that society should not spend public energies and resources examining defensive or likely defensive applications

for patent or other applications which the applicant may himself determine to abandon if but given five years to do so. Hence, by this argument we should have deferred examination so that the interest of the applicant, if any, may be determined before the expense of examination is undertaken.

To which the compelling response, in context of the many circumstances above developed, is: The Patent Office can examine all applications at less expense to society than all of the mischiefs of long-deferred examination.

Let the defensive application be published at the applicant's request and cost as a *public-dedicated* "patent," consistent with S.3007, 88th Congress, if the applicant acknowledges that his is a defensive application.

But until the applicant is willing to give up his right to affirmative protection and is willing to dedicate his invention to the public, let him not hide in the bushes for seven years.

Let the examination that narrows his coverage to the invention's real merit, and that publishes the *final* patent with its limitations in it, and that publishes only examined patents of merit found by the Examiner and not a lot of trash paper, and that publishes only after the inventor knows what protection he is to get in exchange for publication—

—Let that examination proceed as surely and as rapidly as one car follows another on the freeway.

OUR HISTORY ON PATENT REGISTRATION SYSTEMS

In 1793 we suffered a backlog of unexamined patent applications. Thomas Jefferson, then Secretary of State and thereby Chief Examiner of all patent applications, said: "Let's abandon examination in favor of a registration system."

Senator Williamson of South Carolina said: "Let's copy the British [then] registration system. If it works for England, it will work for us."

He drafted a bill that with administration sponsorship including the active participation of the Secretary of State and Chief Examiner of patent applications, became our Patent Act of 1793.

By that Act the United States abandoned a prompt examination system in favor of a registration system.

The reading of Thomas Jefferson's traverse of the full circle from a believer in examination to registration, thence back again into a

believer in full examination, all before 1813, is fascinating reading.

But it took 23 years after Jefferson found out the grossness of his error before we got a full examination system returned to us in 1836.

The British whom we expressly copied in 1793, what did they do? They reversed themselves and adopted full examination after the United States example.

Now it is the Dutch deferred examination, i.e. "half-registration system" that S.1042 says we should copy.

Let's hope we get the copying done before the Dutch reverse themselves and copy us. But should they?

It is estimated that a 50 percent increase in Patent Office budget is much less than .07 percent of the United States research expenditures. If that estimate is off by 100 percent or 200 percent, Patent Office expense to do the job in this country, and do it *right* is still an itty-bitty tail on the dog.

Contrast Holland where research is very low by comparison with United States research and foreign applications and patent office budget are relatively very high. Dutch decisions quite *reasonably* may be different from United States decisions.

IF THE WORLD GOES TO DEFERRED EXAMINATION

Some have urged that if the world goes to deferred examination and the United States not, the United States will involuntarily become the world's sole examiner of patent applications and that we cannot afford that.

The simplest of aspirin pills will cure that before it becomes even a mild headache.

Title 35 U. S. C. may be amended, and should be amended now, to provide that any applicant claiming a foreign filing date must swear that he has paid the fee and requested regular-order prompt and non-deferred examination of his foreign applications. He thus must pay the same fee abroad for the same regular-order examination he gets for this fee under our Title 35.

This simple change will effect reciprocity on this issue of examination.

CONCLUSION

These remarks have only begun the development of what bugs are to be found in deferred examination. But need more be said?

Justice Frankfurter phrased it this way:

We must be especially wary against the dangers of premature synthesis, of sterile generalization, *unnourished by the realities of law in action*.

I phrase it this way: Deferred examination is a Rube Goldberg invention.

REVIEWS AND ANNOTATIONS

Recently Published or Reported Material Relating to the Research Institute's Work

Books

Allen, J. A., *Scientific Innovation and Industrial Prosperity*, New York: Elsevier, 1967. 152 pp. \$7.00.

Barber, Richard J., *The Politics of Research*, Washington, D.C.: Public Affairs Press, 1966. 167 pp.

The author skeptically scrutinizes the expenditures for research and development in the United States, particularly the sizeable portion that comes from federal funds. It is his contention that the affairs of science in government should be brought within the actual control of the political institutions of government. He stresses the size, the nature, the administration, and the implications for the economy of government subsidized research and development, and designs his presentation to alert the reader to the serious problems involved for American society. The following section subjects are selected at random to indicate the broad spectrum covered in the book: the organization of the government for science, the rise of research in government, adequacy of civilian

research, distribution of research among government agencies, the nature of government research, its effect on higher education, the geographic distribution of research funds, concentrated character of awards to industry, patent rights, recent revisions in government patent policy, and the suppression of information of government-financed research. The author believes that needed reforms of government research expenditures are imperative, and in the final chapter he supports this view with five charges:

"First, the government's research undertakings reflect debatable selections . . .

"Second, the impact on civilian research has rarely been taken into account . . .

"Third, the largest federal programs have been administered in such a way as needlessly to accentuate trends to industrial concentration . . .

"Fourth . . . , Negligible attention has been given to putting this knowledge to use by making it publicly accessible.

"Fifth, research planning and coordination are principally

distinguished by their absence."

Among the remedies he recommends most strongly is an improvement in program selection. He advocates that the government's research and development should be presented in terms of defined program areas regardless of sponsor. The author faults both the Executive and Legislative branches of the government in this regard. Although the text is written with forcefulness and color, and the author has also assembled a formidable array of information, the work suffers

from apparent bias with respect to certain issues, e.g., government patent policy. On the whole the treatise makes very interesting and informative reading. The lack of an index, however, detracts from its usefulness as a research tool. The author has been associated with the staffs of the Joint Congressional Economic Committee and the Senate Antitrust and Monopoly Subcommittee.

Dorl, Roland T., *Strategy for Patent Profits*, Park Ridge, New Jersey: Noyes Development Corporation, 1967. 138 pp. \$18.

Periodicals

Adams, E. F., "Legality of Compulsory Package Licensing of Patents," *Antitrust Bulletin*, Vol. 12 (Fall 1967), p. 773.

"American Companies Abroad Using Foreign Brain Power for New Products," *U.S. News and World Report*, February 26, 1968, p. 60.

"Antitrust-Patents-Licenses-Regulation of Patent License Royalty Rates Under the Antitrust Laws," *Michigan Law Review*, Vol. 65 (June 1967), p. 1631.

Aracama-Zorraquin, Ernesto D., "Exploitation, Assignment and Licensing of Trademarks in Selected Latin American Countries," *Trademark Reporter*, Vol. 57, No. 8 (August 1967), p. 503.

"... the Argentine system of

trademark exploitation, transfer and licensing is a system based upon freedom of enterprise, i.e. freedom to use or not to use the trademark; freedom to assign the trademark with the business or without it; and freedom as well to license the use of the mark to third parties without the intervention and control of the State."

Banner, Donald W. "Observations of a Corporate Patent Attorney on the Report of the President's Commission on the Patent System," *The George Washington Law Review*, Vol. 36, No. 1 (October 1967), p. 110, at 120-21.

"... on balance the Report of the Commission is unsound. Many of its recommendations may reduce or eliminate tasks

now required of the Patent Office, but the correlative burdens placed on patent applicants would be increased to a much greater degree than is either necessary or desirable. By eliminating interference practice and the Patent Office task of deciding interferences in approximately one per cent of the applications filed, the procedures would be changed with respect to 100 per cent of the applications filed. The overall costs of operating the patent application portion of a Patent Department would be vastly increased, and in many cases, become insupportable. It is certain that there is nothing in the Commission's Report which would speed public disclosure of much scientific and technical information, nor would it raise the quality and reliability of patents. Indeed, it would reduce the reliability of patents."

Becker, W. and S. Heller, "The 'Rule of Doubt'—*in re Hofstetter*," *Journal of the Patent Office Society*, Vol. 49, No. 8 (August 1967), p. 607.

"The decision in *Hofstetter* crystallizes the opposing views of the CCPA and the CADC on the rule of doubt. However, *Hofstetter's* reasons supporting the rule of doubt, even bolstered by the language of Title 35 and the possibility of an incomplete record before the CCPA, are not persuasive in view of *Graham v.*

Deere, Congressional intent as illustrated by the APA, the presumption of validity, and cases requiring proof of secondary indicia of patentability. Therefore, the CCPA should abandon the rule as the CADC has done."

Blaustein, P. H., "Presidential Commission and the Return to the Patent Act of 1793," *American Bar Association Journal*, Vol. 53 (October 1967), p. 911.

Brenner, E. J., "Testimony in Support of H.R. 5924," *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 303.

Briglia, Joseph P., "Choice of Law for the Tort of Unfair Competition," *Trademark Reporter*, Vol. 57, No. 8 (August 1967), p. 528, at 530.

"... Because of these present, and possible future, differences in the state laws on unfair competition, it is submitted that the courts should have a mechanism to determine applicable law to permit the parties prospectively to assess their rights. Traditionally the means used to solve choice of law problems, was application of the law of the 'place of the wrong.' Other means or criteria for resolving the choice of law problem also exist today. The purpose of this note is to discuss the criteria currently in use in resolving the choice of law problem. At the conclusion it is hoped that a workable solution may be put forward."

Cetron, Marvin J., "Forecasting Technology," *Science and Technology*, September 1967, pp. 83-92.

A somewhat popular article on a widely attractive subject, regarding which the recent journalism has far outrun the accomplishment.

Chapman, Leland L., "Corporate Policy Decisions," *The Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 764.

"This is a case history of some of the corporate policy matters that we considered in my company, The Standard Oil Company (Ohio), some of the various thoughts that we had, some of the reasons for and against what we did, and what course of action we took after thinking about this."

Choate, Robert A., "Invention and Unobviousness—'Afterthoughts'—Reliance on Features and Advantages Undisclosed at Original Filing," *Journal of the Patent Office Society*, Vol. 49, No. 9 (September 1967), p. 619, at 620.

"... it is one thing to fail to include in a claim a structural feature which will distinguish from the prior art. It is quite another matter to be precluded from advancing a feature or advantage of claimed subject matter because it had not been heralded in advance by inclusion in the original specification."

"Community Antenna Television," *Washington Law Review*, Vol. 42 (March 1967), p. 649.

Cooper, H. D., "Estoppel to Challenge Patent Validity: The Case of Private Good Faith Is Public Policy," *Western Reserve Law Review*, Vol. 18 (May 1967), p. 1122.

"Copyright Law Revision—Copyright Notice, Governmental Ownership of Copyright and the Manufacturing Clause," *Iowa Law Review*, Vol. 52 (June 1967), p. 1121.

"Copyright Law Revision: Its Impact on Classroom Copying and Information Storage and Retrieval Systems," *Iowa Law Review*, Vol. 52 (June 1967), p. 1141.

"Copyright Law Revision: Unilateral Federal Protection," *St. John's Law Review*, Vol. 42 (October 1967), p. 226.

Crisman, Thomas L., "In-House Publications—Can They Endanger Rights in Technical Information?" *Journal of the Patent Office Society*, Vol. 49, No. 8 (August 1967), p. 549.

"... 'in-house publications' often contain very valuable proprietary information, and even though they enjoy limited circulation, the question arises as to whether rights in this information can be jeopardized when the circulation within a company becomes too widespread or too

unguarded. One issue which arises in this area is whether distribution to your own engineers who have no immediate need to know the technical information can endanger your rights in that information under the patent laws (i.e., create a 'printed publication') or the law of trade secrets. It is this type of issue that this article seeks to explore."

Derenberg, W. J., "Twentieth Year of Administration of the Lanham Trademark Act of 1946," *Trademark Reporter*, Vol. 57 (October 1967), p. 643.

"Design Protection—Time to Replace the Design Patent," *Minnesota Law Review*, Vol. 51 (April 1967), p. 942.

"Developments in the Field of Restrictive Business Practices," *Antitrust Bulletin*, Vol. 12, (Summer 1967), p. 621.

Dobbs, M. C., "Time for a New Approach," *New Law Journal*, Vol. 117 (September 28, 1967), p. 1041.

"Effective Use of Government-Owned Rights to Inventions: Publication Versus Patenting," *Georgia Law Journal*, Vol. 55 (May 1967), p. 1083.

Frayne, G. M., "More Thoughts on Possible United States Adherence to the Madrid Arrangement," *Trademark Reporter*, Vol. 57, No. 7 (July 1967), p. 447.

Frayne, Gabriel M., "Technical Trademark Questions — International," *Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 822.

"... the first piece of advice to those engaged in acquisitions or mergers involving trademark rights is to make certain that these rights are embodied in registrations effected at the Patent Offices or Trademark Registries of the countries in which such rights are claimed."

Frost, G. E., "1967 Patent Law—First-to-Invent vs. First-to-File," *Duke Law Journal*, 1967 (October 1967), p. 923.

Frost, G. E., "Patents and Copyrights," (Antitrust Exemptions: A Symposium), *American Bar Association Antitrust Law Journal*, Vol. 33 (1967), p. 63.

Frost, George E., "'Patent Reform' and the Business Community," *The George Washington Law Review*, Vol. 36, No. 1 (October 1967), p. 100 at 103.

"This history should be taken into account in assessing the Commission Report. Was the assignment of the Commission realistic in the light of the time limitation and personnel? The Commission was directed to make an independent study of the patent system and determine the extent it currently serves national needs and international goals. This task alone could be a full-time oc-

cupation for 18 months by persons with initial expertise in the economics of the patent system. The Commission was ordered to examine the administration of the patent system, which of course includes the Patent Office. Again, the task is a full-time job for 18 months. Indeed, a report just prior to the Commission confined to selected aspects of Patent Office operations required six months of intensive effort by its author. On top of all this, the Commission was to consider the relationship of the United States patent system to foreign patent systems—an esoteric subject even among many persons actually engaged in patent work. Finally, the Commission was to come forth with 'possible improvements' in the system. A Commission of distinguished and talented persons—as this Commission was—has a very great value. It can apply lessons from diverse experiences to the solution of social and governmental problems. But no group, no matter what its membership, can in a short time absorb all the intricacies, weigh the economic and social facts, and come up with specific proposals for improvement, where the institution involved is as vast as the patent system. In short the Report of the Commission is an excellent foundation for discussion and debate—but one may well question the extent such a report

should be regarded as a definitive statement of what (if any) legislation should be enacted."

Goldschneider, R., "Encouraging the Flow of Goods and Know-How Among Nations—the Role of Industrial Property Rights and Antitrust Laws," *Western Reserve Law Review*, Vol. 18 (July 1967), p. 1618.

Gregg, E. B., "Tracing the Concept of 'Patentable' Invention," *Villanova Law Review*, Vol. 13 (Fall 1967), p. 98.

Harff, Charles H., "Corporate Acquisition Problems," Part I—Trademark Problems in Acquisitions and Mergers, *The Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 743.

"We will discuss, therefore, what I would call bulk transfers of businesses, not isolated transfers of trademarks or patents, or other property rights."

Higgins, W. E., "Significance of Preambles in Chemical Composition Claims," *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 337.

Hinrichs, R. N., "Proprietary Data and Trade Secrets Under Department of Defense Contracts," *Military Law Review*, Vol. 36 (April 1967), p. 61.

Holland, Reginald H., "Technology Transfer," *Conference Board Record*, September 1967, pp. 36-40.

A "critique on a seminar," reported in the form of a conversation among seven panelists. The original seminar was held in March 1967, on the problem of maximizing the civilian benefits of AEC and NASA technology; the critique was held in June 1967. "As I listened," concluded the panel chairman, "I recalled Churchill's observation that when he called upon the six greatest economists in Britain he got seven different answers, including two from Lord Keynes."

"International Law and Trademark Infringement—Rights of Former Owners of Confiscated Cuban Businesses Under the Hickenlooper Amendment," *Vanderbilt Law Review*, Vol. 20 (May 1967), p. 916.

Jackson, J. G., "Booby Traps in License Agreements—The Customs Problem," *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 435.

Jacobs, M. C., "Commission's Report re: Computer Programs," *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 372.

Joel, Richard A., "Fraud in the Procurement of a Patent," *Journal of the Patent Office Society*, Vol. 49, No. 8 (August 1967), p. 596.

"... the question arises whether an individual who has procured

a patent through fraud on the Patent Office is subject to an action under Section 2 of the Sherman Act and thereby liable to a treble damage claim under Section 4 of the Clayton Act. Prior to the recent case of *Walker Process Equipment Inc. v. Food Machinery and Chemical Corporation*, the answer was a distinct no. The United States Supreme Court, however, in a precedent shattering decision handed down December 6, 1965, ruled otherwise. The reasons behind this decision, the past and present state of the law and the future trends as they may be perceived in the light of present indicators will be explored at length in the following pages. The general subject is fraud in the procurement of a patent and all its ramifications."

Jovanovich, W., "To Vouchsafe Identity," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (June 1967), p. 355.

Kaminstein, H. L., "Statement of the United States Delegation on the Berne Convention," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (August 1967), p. 435.

Keating, W. J., "Inventor's Dilemma: The Right to Copy v. Proprietary Rights," *St. John's Law Review*, Vol. 42 (July 1967), p. 38.

Koenig, Gloria K., "The Shop

Right—Time for Limitation," *Journal of the Patent Office Society*, Vol. 49, No. 9 (September 1967), p. 658, at 675.

"The cases indicate that even where the time and facilities of the employer are used, the shop right will be denied if there has been a prompt demand for compensation. The valuable rights of the employee should not depend on an immediate verbal or written demand for payment that he does not know he must make. 'Estoppel by silence' is too harsh a punishment to be applied to the uninformed employee.

"The burden of requiring an immediate demand for compensation by the employee should be changed to requiring the employer to establish that the employee did not want compensation. It should be implied that when an employer uses the invention of an employee who was not hired to invent, that the employee expects to be fairly compensated for such use."

Koykka, T. V., "Infringement of Patents," *Federal Rules Decisions*, Vol. 42 (June 1967), p. 43.

Lachmann, K. E., "Role of International Business in the Transfer of Technology to Developing Countries," *Journal of Business Law*, 1967 (October 1967), p. 346.

Ladas, Stephen P., "Proposal For a New Agreement for International Registration of Trademarks,"

Trademark Reporter, Vol. 57, No. 7 (July 1967), p. 433.

"Legal Basis for Precluding a Patent Examiner from Testifying," *Indiana Law Journal*, Vol. 42 (Winter 1967), p. 255.

"Legal Information Retrieval Systems and the Revised Copyright Law," *Valparaiso University Law Review*, Vol. 1 (Spring 1967), p. 359.

Leonard, J. W., "Protected Rights of the Employee-Inventor in His Invention," *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 357.

Lorenzo, A. P., "Insufficient Disclosure, Obviousness, and the Reasonable Man," *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 387.

McAuliffe, Jeremiah D., "Central America" *Trademark Reporter*, Vol. 57, No. 8 (August 1967), p. 517.

"... It is my object to review in a rather brief way how the five Central American countries, Costa Rica, Guatemala, Honduras, Nicaragua, Panama and El Salvador approach the subjects of user requirements for the maintenance of trademark rights as well as the assignment and licensing.

In addition to the local law of each country it is appropriate to consider the pertinent provisions of the Pan American Convention of 1929 since these countries, as

well as the United States, are party to that Convention with the exception of Costa Rica and El Salvador."

McDermitt, M. P. and R. A. Manetti, "Protection of Discontinued Company Names," *Business Lawyer*, Vol. 22 (January 1967), p. 423.

McGee, J. S., "Patent Exploitation: Some Economic and Legal Problems," *Journal of Law and Economics*, Vol. 9 (October 1966), p. 135.

Meek, M. R. and I. R. Feltham, "Foreign Sales Distribution, Licensing and Joint Venture Agreements," *De Paul Law Review*, Vol. 17 (Autumn 1967), p. 46.

Meller, Michael N., "The Patent Cooperation Treaty—Utopia or Millenium," *Journal of the Patent Office Society*, Vol. 49, No. 8 (August 1967), p. 565.

"If change is to be made in the U.S. patent laws, let this change be made after proper airing of all views in the halls of Congress with the consideration of the Patent Reform Act of 1967. If our patent philosophy is also to be changed, let that also be discussed freely by all interested parties. The Patent Cooperation Treaty should not be made a vehicle for the adoption of these basic changes. Participation in Phase I would have some internal benefits to the U.S. Patent Office, together with the benefits

other nations will derive reciprocally. Participation in Phase II, however, would not only be undesirable but inimical to the interests of U.S. inventors and businessmen."

Meyer, Harold S., "Utility Requirement in the Statute," *Journal of the Patent Office Society*, Vol. 49, No. 7 (July 1967), p. 533.

"Recent decisions concerning the statutory requirement that an invention be 'useful' have expressed such extremely divergent views, concerning the meaning of the statute and the kind of description which an applicant for patent must submit, as to suggest that a statutory clarification should be attempted. Before this is done, the history of the requirement should be examined to ascertain how it originated, and the preferred policy of the law should be ascertained. Then and only then will it be possible to frame a statutory statement which will be satisfactory to owners and users of inventions, and will be understood and properly applied by the Patent Office and the Courts.

"It is submitted that the statute has required and should still require only that inventions be operative in fact for some beneficial purpose, and that a beneficial purpose be disclosed in the patent when it is issued, as will be explained in detail below. Specific statutory language to

clarify the law in these respects is proposed."

Miller, A. R., "Computers and Copyright Law," *Michigan State Bar Journal*, Vol. 46 (April 1967), p. 11.

Miller, H. D., "Patent License Restrictions in the Prescription Drug Industry," *Virginia Law Review*, Vol. 53 (October 1967), p. 1283.

Moller, Jose Barreda, "Peru," *Trademark Reporter*, Vol. 57, No. 8 (August 1967), p. 523 at 524.

"... Peru, being a member of several international conventions and a party to one bilateral treaty, recognizes certain rights, mainly rights of priority, of foreign individuals and entities domiciled in the member countries. Except for these priority rights, foreigners and Peruvian nationals have exactly the same rights under our law, whether they are domiciled in Peru or not.

"... Court decisions involving trademarks are rather few and deal mainly with likelihood of confusion between marks. Such decisions are not considered as precedents and therefore there is no real jurisprudence to serve as a guide for the courts, the Patent Office or trademark lawyers. This situation is due partly to the fact that Law 13270 has been in force for only a few years, but mainly

to the fact that decisions involving possibly conflicting marks are decided by the Patent Office. In very few cases do the losing parties appeal to the Courts."

"Monetary Recovery Under the Copyright, Patent, and Trademark Acts," *Texas Law Review*, Vol. 45 (April 1967), p. 953.

Murchison, J. L., Jr., "Patent Acquisitions and the Antitrust Laws," *Texas Law Review*, Vol. 45 (March 1967), p. 663.

Myers, Gary R., "Hays v. Brenner: Double Patenting, Obviousness and the Terminal Disclaimer," *Journal of the Patent Office Society*, Vol. 49, No. 7 (July 1967), p. 467 at 490.

"It is submitted that the use of the terminal disclaimer by the Court of Customs and Patent Appeals to overcome double patenting rejections is in violation of the patentability rules. The terminal disclaimer allows an inventor or assignee to improperly improve his patent position by granting patents for obvious extensions, modifications and improvements. It also creates a double standard for invention by relaxing the patentability requirements in a double patenting setting to the point where only the same invention or colorable variations will be rejected for double patenting. The *Hays* decision complies with the underlying principles of the patent

law that there shall be only one patent for one invention and its obvious extensions, modifications, and improvements, and it should be the controlling rule in regard to the terminal disclaimer."

Neuhauser, F. L., "Sweeping Changes in Patent, Trademark and Copyright Law Pending in Congress," *D.C. Bar Journal*, Vol. 34 (June-August 1967), p. 19.

Newitt, George B., and Jacques M. Duclin, "Today's Patent Problems—Modernizing the System or the Patent Office? *The George Washington Law Review*, Vol. 36, No. 1 (October 1967), p. 136, at 143.

"The problems of the patent system are isolated primarily in the Patent Office. The backlog is symptomatic of the underlying problem—an archaic examination procedure. Fee provision section 41 (a) and research section 12 (a) of the proposed act do come to grips with the problem, although increased appropriations will probably be necessary. There is little justification for an entire organic act, in which the majority of the provisions tinker with the substantive rights of applicants and may result in an increase in the backlog."

Newitt, G. B. and J. O. Nelson, "Patent Lawyer and Trial by Jury," *John Marshall Journal*, Vol. 1 (Spring 1967), p. 59.

"Organization and Management of a Corporate Trademark Department: A Panel" (De Simone, Altin, Hedelund, Daly), *Trademark Reporter*, Vol. 57, No. 9 (September 1967), p. 581.

Parr, R. A., "Impact of Section 483 of Patent Licensing of Corporations," *Journal of Taxation*, Vol. 26 (April 1967), p. 194.

"Patent Attorney and Attorney-Client Privilege," *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 328.

Piggott, C. F., Jr., "Concepts of Public Use and Sale," *Journal of the Patent Office Society*, Vol. 49, No. 6 (June 1967), p. 399.

"Protocol Regarding Developing Countries," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (August 1967), p. 467.

Rajski, J., "Law of International Trade of Some European Socialist Countries and East-West Trade Relations," *Washington University Law Quarterly*, Spring 1967, p. 125.

Redmond, J. C., "Corporate Patent Attorneys 'Privilege' and 'Work Product,'" *New York State Bar Journal*, Vol. 39 (August 1967), p. 316.

Reuben, Samuel, "Imaginative Thinking and Opportunities Afforded an Independent Inventor by the American Patent System," *Journal of the Patent Office So-*

ciety, Vol. 49, No. 6 (June 1967), p. 442.

Rich, Giles S., "Commentary—Proposed Patent Reforms, 1967 Introduction," *The George Washington Law Review*, Volume 36, No. 1 (October 1967), p. 95 at 99.

"The way to perfect a legal system which is working very well, but is developing problems, is first to try solving the problems within the framework of the system, not to junk the system and substitute another with potential problems as yet undreamed of. Let it be remembered that the patent system is supposed to be an incentive system. If it ceases to provide incentives, even though the backlog is abolished and invalid patents are never issued, we may as well dispense with it. The question to be asked first about every proposal for change is, what does this do to the incentives? It is that question which appears to have been forgotten."

Ringer, B. A., "Stockholm Intellectual Property Conference of 1967," *Bulletin of the Copyright Society of the U.S.A.*, Vol. 14 (August 1967), p. 417.

Rotondi, S. J. and J. A. Dobkin, "Government Competitive Procurement and Patent Infringement: Substance and Solution," *Federal Bar Journal*, Vol. 27 (Summer 1967), p. 325.

Rudnick, L. G., "Sealy Case (U.S.

v. Sealy, Inc. 87 Sup Ct 1847): the Supreme Court Applies the Per Se Doctrine to a Hybrid Distribution System for Trademark Bedding Products," *Trademark Reporter*, Vol. 57, No. 7 (July 1967), p. 459.

Salomon, B., "Accession of Argentina to the Paris Convention and its Effect Upon Argentine Trademark Law," *Trademark Reporter*, Vol. 57, No. 6 (June 1967), p. 408.

Scharf, Charles A., "Tax Aspects," Part I—Trademark Problems in Acquisitions and Mergers, *The Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 755, at pp. 758, 759, 760.

"As a general observation, in tax-free acquisitions trademarks are basically in no different position than other assets which the buyer is acquiring. They pose no unique problem in a tax-free acquisition. The tax basis of trademarks in the hands of the seller and generally their accounting treatment in the hands of the seller will carry over into the hands of the buyer, as will be true of the other property owned by the seller."

"The basic tax problem involving trademarks in acquisitions lies in [the] area of the taxable acquisition. In the taxable acquisition a seller will have tax objectives often completely adverse to the tax objectives of the buyer. The taxable acquisition high-

lights the tax conflict between the parties."

Schiffrin, L. G., "Ethical Drug Industry: the Case for Compulsory Patent Licensing," *Antitrust Bulletin*, Vol. 12 (Fall 1967), p. 893.

Schlegel, W. L., Jr., "Research Pitchman," *Business Lawyer*, Vol. 23 (November 1967), p. 181.

Schuyler, William E., Jr., "Small Business and the Proposed Patent Reform Act of 1967," *The George Washington Law Review*, Vol. 36, No. 1 (October 1967), p. 122, at 135.

"Should the Patent Reform Act of 1967 become law, most small businesses will be faced with increased patent costs, longer pendency of patent applications, fewer incentives to expend time and effort on research and development, more restrictions on disclosures prior to filing patent applications, and greater burdens in obtaining and enforcing patents."

Schwartz, Stanley D., "Res Judicata As Applied in Patent Office Prosecution & Patent Enforcement Litigation," *Journal of the Patent Office Society*, Vol. 49, No. 9 (September 1967), p. 637.

"It is the purpose of this paper to examine the status of res judicata both in administrative proceedings before the Patent Office and in patent enforcement litigation. It is an object of this paper to show how the law of res judi-

cata has reached a degree of certainty in proceedings before the Patent Office, although application of res judicata principles in patent enforcement litigation is still in the developing stage. The direction and scope of these principles will be most important to the patent owner and the public at large. It is, therefore, a further object of this paper to suggest a direction that Congress may take, in order to maximize the interests of both the public, in general, and business, in particular, while at the same time protecting the legitimate interests of the patentee."

Sheers, E. H. and F. L. Encke, "Copyrights of Patents for Computer Programs?" *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 323.

Shyrock, R. F., "Survey Evidence in Contested Trademark Cases," *Trademark Reporter*, Vol. 57, No. 6 (June 1967), p. 377.

Siemens, Peter Dirk, "Brazil," *Trademark Reporter*, Vol. 57, No. 8 (August 1967), p. 510.

". . . on February 28, 1967, a new Code of Industrial Property was enacted in Brazil to become effective on May 29, 1967. This Code was rushed through at the very end of the tenure of the previous Government and, due to the rush, several notable omissions, as well as a number of controversial passages in the legisla-

tion, are to be noted. In addition, a partial reorganization of the Brazilian Patent Office will have to be undertaken as a result of the enactment."

Sims, Nathaniel G., "Marketing Policy Decisions," *The Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 786.

"In general, marketing decisions should be viewed primarily from the point of view of the customer or market in which the products or services will be sold, i.e., market-oriented."

Springs, D. M., and J. Arnold, "Law of Unfair Competition: The Impact of the Lanham Act Section 43 (a)," *Journal of the Patent Office Society*, Vol. 49, No. 5 (May 1967), p. 348.

Timberg, Sigmund, "Antitrust Considerations," *The Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 775.

"First, a trademark is an 'asset' within the meaning of Section 7, and hence its acquisition may raise questions under that statute if the probable effect of the acquisition is substantially to lessen competition.

"Second, in some situations where the buyer is nominally acquiring only a trademark, he is as a matter of commercial reality acquiring a business. In my opinion, it is only in those circumstances that the acquisition of a trademark raises substantial Sec-

tion 7 problems.

"Third, where the acquiring firm is able to mobilize much greater financial resources in the advertising of a trademark than the acquired firm, the probable effect of the acquisition is considered by the Government to deter potential competitors from entering the market, to diminish the competition of smaller firms already in the market and to diminish price competition."

"Toward the Establishment of an International Patent: Progress and Problems," *Virginia Journal of International Law*, Vol. 7 (April 1967), p. 163.

"United States Patents Claiming Foreign Filing Dates as References Against United States Patent Applications," *Southwestern Law Journal*, Vol. 21 (Summer 1967), p. 552.

Watson, Donald Stevenson and Mary A. Holman, "Concentration of Patents from Government Financed Research in Industry," *The Review of Economics and Statistics*, Vol. 49, No. 3 (August 1967), p. 375, at 381.

"That one-half of the patents acquired by contractors from their government financed research and development should be owned by 20 large corporations must, so we imagine, come as a shocking finding to many observers. We are not sure just what adjective should apply to the ac-

companying fact that 20 corporations perform two-thirds of the R and D carried on in industry for the federal government. Anyway, we do not look upon the concentration of these patents as a serious matter. This concentration has been declining and is significantly less than the concentration of the R and D producing the patents. We can see no threat to the competitiveness (such as it is) of industry from the concentration of these patents.

"The policy issue is whether our findings should be the basis for changing federal policy on the disposition of patent rights in contracts for research and development. The findings do not support a major change in policy, let alone a radical one."

Watson, Robert C., "The Patent Reform Act of 1967—Some Comments Upon Certain of Its Provisions," *Journal of the Patent Office Society*, Vol. 49, No. 7 (July 1967), p. 493 at 531.

"These comments have been written with the thought in mind that an expression of the views of a conservative may be helpful at a time when there is so much pressure in the opposite direction and not with the expectation that even all conservatives will agree. My experience as a practitioner has left me with the strong feeling that an efficient Patent Office will minimize litigation based on issued patents. Also that applica-

tions filed abroad under the 'first-to-file' system are not as satisfactory as those which were prepared initially in this country.

"Even if we have the most rigorous examination in our Patent Office, and even if the International Patent Institute under BIRPI's recent proposal issues an international certificate of patentability, we will still have some patents which will be declared invalid by the courts. There will always be honest differences of opinion, based on identical facts, as to the obviousness or non-obviousness of any certain improvement which is claimed to be an invention. But good unhurried examination, based on all available facts, will improve the quality and decrease the likelihood of the issuance of patents thought by the courts later to cover 'obvious' suggestions.

"Finally, it is again suggested that it is most difficult to understand how the several objectives of S. 1042, mentioned in the President's letter of transmittal, will be realized if the bill is enacted in its present form. To the contrary, it is believed that enactment of the bill without material change will work injury to our economy. Careful, unhurried evaluation is thought to be in order."

Wertheimer, H. W., "Principle of Territoriality in the Trademark Law of the Common Market

Countries," *International and Comparative Law Quarterly*, Vol. 16 (July 1967), p. 630.

Whittredge, Robert B., "Technical Trademark Questions — Domestic," *The Trademark Reporter*, Vol. 57, No. 11 (November 1967), p. 805.

"The so-called technical aspects of the trademark side of a corporate acquisition comprise the nuts and bolts of that phase of the acquisition. They are the sometimes dull and prosaic but nevertheless essential details, which bring all the pieces together into an integrated, well-constructed whole, in order to effect a proper conveyance from one party to the other of what may be described as the acquired company's trade-

mark assets.

"The phrase 'trademark assets' is here used in a broad sense."

Wolfe, E., "Restrictions in Know-How Agreements," *Antitrust Bulletin*, Vol. 12 (Fall 1967), p. 749.

Woodward, William R. "Changes in the Patent System Recommended by the President's Commission," *Federal Bar Journal*, Vol. 27, No. 3 (Summer 1967), p. 189 at 191.

"It is the purpose of this article to discuss those of the Commission's recommendations which are most likely to be regarded by lawyers as both important and controversial, together with other recommendations closely related thereto."

Reports

Proceedings of a Conference on Technology Transfer and Innovation. National Science Foundation, Washington, D.C.: Government Printing Office, 1967. 126 pp. \$0.65.

Based on a conference held in May 1967 under the joint auspices of the National Science Foundation and the National Planning Association. The conference was the outgrowth of a study of stimuli and impediments to the civilian application of technological developments in the defense and space programs.

Policy Planning for Technology Transfer. Report of the Subcommittee on Science and Technology to the Select Committee on Small Business, U.S. Senate, 90th Cong., 1st Sess., April 6, 1967. 183 pp. \$0.50.

Prepared by the Science Policy Research Division, Legislative Reference Service, Library of Congress, this report contains 12 chapters and ranges widely. It makes occasional reference to patents and proprietary information (e.g., pp. 162-164).

NOTES

Ladas Receives 1967 Kettering Award

Stephen P. Ladas, a Senior Partner in the firm of Langner, Parry, Card and Langner of New York, Chicago, Los Angeles and Paris has been named the Charles F. Kettering Award recipient for 1967 for Meritorious Work in Patent, Trademark, and Copyright Research and Education.

This award is presented annually by The PTC Research Institute. Recent winners were: for 1966, Lawrence R. Hafstad, a physicist and Vice-President in charge of the General Motors Research Laboratories; in 1965, General David Sarnoff, Chairman of the Board of the Radio Corporation of America; and in 1964, Dr. Edwin H. Land, inventor of modern light polarizers and of the Polaroid Land camera and process for instant pictures.

Dr. Ladas has been active for many years in research and writing related to the international protection of industrial property. He has served as Chairman of the Commission for Industrial Property of the International Chamber of Commerce; Chairman of the Committee for the Protection of Industrial Property of the U. S. Council; and is a member of the Permanent Bureau of the International Association

for Protection of Industrial Property.

Dr. Ladas received a law degree from the Law School of the University of Athens and a diploma from the School of Political Sciences in Paris. He was subsequently awarded the L.L. B. and S.J.D. degrees from Harvard Law School and is a member of the New York Bar.

Among the honors received by Dr. Ladas are two decorations from the government of Greece. He is an honorary member of the Executive Committee of the International Patent and Trademark Association in the United States, and honorary member of the International Association for the Protection of Industrial Property, and an honorary member of the Inter-American Association for Industrial Property. He is a Corresponding Member of the Academy of Athens and of the Instituto Argentino de Derecho Intelectual.

Dr. Ladas has also written numerous articles and papers on industrial property. He has authored several books, including *The International Protection of Industrial Property* and *The International Protection of Literary and Artistic Property*.

Announcing Institute's Twelfth Annual Public Conference

Industrial Property: Instrument to Foster Technology for Economic Advance is the new theme of our Twelfth Annual Public Conference

to be held at the Shoreham Hotel in Washington, D. C. on June 20-21, 1968.

Legislative needs involving industrial property will be analyzed for their relationship to economic, technological, and cultural advancement. Research of the Institute bearing on the Presidential Commission *Report* and proposed federal legislation stemming from the *Report* will be presented and discussed. The industrial property systems will be considered by invited speakers as well as staff mem-

bers in the light of the public interest, recent court decisions, and existing inventor and company situations. Special attention will be directed to the improvement of the international role of industrial property for both advanced and newly industrialized countries.

The sessions run serially rather than parallel so that persons attending can get full import of the Conference. Circle the Conference dates on your calendar and see below for the advanced registration form.

Dates: June 20 and 21, 1968

Time: 9 a.m. Thursday to 1 p.m. Friday

Charles F. Kettering Award Reception and Dinner on Thursday evening.

Place: Shoreham Hotel, Washington, D. C.

Registration: Registrations for the Conference are limited by the hotel facilities and should be made early. Fill out and return the advance registration form to facilitate confirmation.

ADVANCE REGISTRATION FORM

Please make checks available to The PTC Research Institute of The George Washington University and forward to Washington, D. C. 20006.

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I shall arrive at the hotel: (day and hour)

Hotel reservations (not included in the Conference fee) will be forwarded by us to the Shoreham Hotel which will send letters of confirmation to you.

Robert Adler Chosen for Inventor of the Year Award

Dr. Robert Adler, inventor in the field of electronic products, devices and systems used in aircraft communications, radar, TV and FM broadcasting, has been designated by the Research Institute's Board of Awards to receive its 1967 Inventor of the Year Award. He will be presented the Award at a reception in his honor to be held April 25, 1968 at 4 p.m. at the Shoreham Hotel, Washington, D.C.

Born in Austria, Dr. Adler received his Ph.D. from the University of Vienna. He joined the Zenith Company as a research engineer in 1951. In 1952 he was named associate director of research and elected a vice president in 1959. He became Zenith's director of research in 1963.

Dr. Adler's most significant recent contribution has been his co-

invention of a stereo FM system which permits the public to enjoy FM broadcasts in full FM stereophonic sound, due to his phasitron modulator tube and system which is now used by more than 500 FM stereo stations and is incorporated in most radio-phonograph combinations and FM tuners.

The Inventor of the Year Award honors a journeyman or professional inventor who has made a significant patented invention or inventions. The award also affords an opportunity to recognize a relatively unknown inventor who overcomes obstacles and expends his resources to produce an invention or inventions. Chester F. Carlson was named Inventor of the Year for 1964, Samuel Ruben for 1965, and Gordon K. Teal for 1966.

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Proceedings
Eleventh Annual
Public Conference

The PTC Research Institute of
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Increased funds will enable the Institute to develop a larger research staff and to engage resident scholars to serve better the interests of its members as well as of the public. We also plan to extend our research into new areas and to augment our activities involving current issues. We propose, too, the expansion of our educational efforts to participate in the Institute's research efforts.

This is the opportune time to join The PTC Research Institute, to make personal gifts or company grants, and to arrange for bequests. Please turn to the inside back cover for membership information. For further information, please contact the Director of The PTC Research Institute, The George Washington University, Washington, D.C. 20006.

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Devoted to the publication of scientific research regarding the principles, the facts, and the practical operations of the patent, trademark, copyright, and related systems of the United States and other countries;

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IDEA

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Protection Needs in R&D

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The Conference Digest

The Eleventh Annual Public Conference provided the setting for the presentation and discussion of the findings of the Research Institute relating to important issues of the day and was particularly directed toward "Improving Industrial and Intellectual Property Systems for Greater Social Progress."

The Ninth and Tenth Annual Public Conferences had been designed to serve as a data base for the President's Commission on the Patent System. Now that the Commission's Report has been published, the Eleventh, in a broad sense, was intended to provide perspective. To this end the Conference analyzed proposed legislation for its relationship to economic, social and cultural advancement and considered these legislative needs in the light of the public interest, recent court decisions, existing company situations, and the international challenge. At the same time, the Conference also provided an opportunity for people from different areas of interest to meet and participate in the stimulating and productive exchanges and contacts of the Conference from which the Institute itself may derive guidance on the planning of its future work.

The research work of The PTC Research Institute represents the first university attempt at a comprehensive study of the patent, trademark, copyright and related systems in the United States. This study is systematically planned and coordinated, inter-disciplinary in nature and utilizes a combination of specialities such as economics, statistics, psychology, sociology, and law; and empirical, that is, based on the facts gathered by the staff on the actual operation of the systems.

In attendance at this Eleventh Annual Public Conference were key representatives from different fields of activity throughout the nation: commerce, education, science, manufacturing, labor, finance, and the professions.

The proceedings of the Conference are published in this issue of *IDEA*. It contains a summary, an edited transcript of the proceedings which includes research prepared by the staff of the Research Institute preceding the Conference, the presentation of current issues by qualified discussants, and questions from the floor.

FORMAT AND OBJECTIVES

L. James Harris, Director of the Institute, in his introductory remarks, briefed the participants on the Conference format and objectives and on relevant research of the Institute. He said, in part:

"... The Institute has continued its reports on government patent policy from its pioneer research report by Professors Watson, Bright, and Burns published in Volume 4, Number 4 of *IDEA*. With ever larger appropriations for military and space research, the apparent cooling down of the Congressional debate on this question may be deceptive and the Institute, accordingly, continues its interest. If you will turn to your programs you will see that in Session II, Part IV we will consider whether 'Proposed Legislation on Government Patent Policy Will Meet the Challenge?'

"For some time now, the Institute has been seeking information on subject matter very relevant to unfair competition. Since its inception, the Institute has included the subject of trademarks in most of its research studies and for the past year or so has undertaken a project related exclusively to trademarks. Dr. Siegel, a senior member of our Research Staff, and I have also been engaged on a study of trade secrets. Although the unfair competition legislation does not have the momentum generated for some of the others, if it should catch the Congressional fancy, it could involve some major changes in the law. Moreover, the Research Program Committee of our Advisory Council placed studies on trademarks and trade secrets high on the recommended list. In the Second Session, Part II of this Conference we will consider whether 'Proposed Legislation on Unfair Commercial Activities Pertaining to Trademark Identity and Trade Secrets Will Meet the Challenge?' . . .

"Our Institute's analysis of foreign industrial property systems is only one of a series of Institute studies being undertaken that bear on the recent Report of the President's Commission on the Patent System. The purpose of all these studies is to reveal, where possible, the effects on innovation and economic progress of certain major changes in the law proposed by the Commission. The Institute in other studies in this series is questioning experts in the field of innovation comprising.

- (1) A random statistical sampling of recent patentees and assignees from whom it is seeking factual information particularly on the significance of the grace period;
- (2) A selected group of recognized inventors to obtain information on any contemplated change in their method of operation due to the

Commission's Report and their relevant experience under the present system;

(3) Administrators of research of major U.S. firms for their relevant contemplated action and past experience; and

(4) Companies for factual information on trade secrets.

"The Institute's published reports will also be reviewed to extract and correlate findings that may be of assistance in evaluating the Commission's Report. In Session II, Part I of this Conference we will consider whether 'Proposed Legislation Deriving from the Report of the President's Commission Will Meet the Challenge. . .'

"... In view of the Report of the President's Commission, the implementing legislation, and the scheduled hearings, there have been a rash of conferences and seminars on the Report. The Institute's Conference is distinguished from other conferences and seminars in that its emphasis is on a presentation and discussion of *factual* information by invited contributors and by members of the Research Staff. The Institute seeks at these Conferences not alone to teach, to provide factual information for the publics attending, but also to derive guidance on planning its future programs and additionally, and of equal importance, the Institute's Conferences serve a staff function for those who require factual information for sound decision-making. The emphasis of the Conference this year is as the theme indicates—on improving the systems for greater social progress. This is in line with the Institute's objectives in that the Institute is seeking to work out a technique for tapping the experience of knowledgeable people to present their ideas in a broad forum with the Institute as the interface, moving forward, not by protecting the status quo but by making the system's evolution vital and meaningful. Our last two Annual Public Conferences were directed primarily to providing a data base for the President's Commission on the Patent System. Now that the Commission's Report has been published this Conference, in a broad sense, is intended to provide perspective. The Conference will analyze proposed legislation for the relationship to economic, social, and cultural advancement. It will be considering legislative needs in the light of the public interest, recent court decisions, existing company situations and the international challenge.

"The Conference you will note is divided into three sessions. The First Session will present the *problems* and *issues* by research people on the frontiers of R&D. The Second Session will consider *solutions* by specialists who are expert in intellectual and industrial property. These two sessions will form the two sides of the triangle for the apex, the Third Session. The Third Session is concerned with management *decision-making* based on the problems and suggested solutions offered in the previous two sessions. . . ."

THE KETTERING AWARD ADDRESS

The following paragraphs are excerpted from the acceptance address of Lawrence R. Hafstad, Vice President in Charge of Research Laboratories of General Motors Corporation to provide the reader with some indication of its very provocative content:

"We have all long been interested in the United States patent system and no little concerned that it should seem to be under attack. Its purpose, as well as its effectiveness, is being questioned, and claims are made that conditions are now so changed that the patent law as we know it is obsolete. I read that the law has not been changed for 130 years, and this is given as a need for a basic overhaul. While need for changes may be indicated, this specific argument leaves me cold. Our Constitution is considerably older than our patent system, and I am tempted to add that the Ten Commandments are a lot older than either. What endures must contain some element of good, and in my mind this should be a symptom of strength, not of weakness. . . .

"In recent months we have all been exposed to the pros and cons of the proposed new patent law. The objectives are unassailable—namely, (1) to raise the quality and reliability of United States patents, (2) to reduce the time and expense of obtaining and protecting a patent, and (3) to speed public disclosure of scientific and technological information.

"In the fine print, however, and in the discussions, one encounters confusing questions of both procedure and policy. There is lip service to the underlying need to provide incentive for the actual inventor, but the real worry is all about the excessive work load for the Patent Office; whether title to inventions from government R&D should go to the government or a contractor; and the inherent iniquity of any monopoly, even once created by the government itself. Finally, there is much concern about the patent rights of the professional employed inventor as against that of his employer, whether in private industry or in government. . . .

"In my personal opinion much of the current controversy about our patent system arises because this recognition of the distinction between invention and innovation is at odds with popular American folklore and mythology, and the hopes and dreams of individual inventors. Many patent lawyers may disagree with this statement, but patent lawyers talk mainly to each other and draw their conclusions from a highly unrepresentative sample. As the American dream has it, based on conditions a century ago, the lone basement or backyard inventor gets a simple, novel, but revolutionary idea, like putting a wiggle in the hairpin wire, gets a patent, and his fortune is made. In such simple

cases invention and innovation are synonymous. In this day and age, however, especially for industrial applications based on modern science, most inventions involve much more sophisticated ideas. It is not so much that the inventive process itself has changed, as that the innovation component of the overall process is assuming a continually increasing role. Invention is still absolutely essential, for this triggers the rest of the process, but we now need at least equal incentive for innovation in addition. . . .

"The question of government title to government-financed inventions is one with which I have had considerable experience, and this may make my impressions in this area of some value. . . .

"... 'What happens next *after* the patent is turned over to the public? If, when an invention financed by the government is turned over to the public, several manufacturers immediately start production and begin to compete for lower price—then the public is served and public-title approach is a success. If, on the other hand, the manufacturers shun the patent since they no longer have any hope of protecting their chance of recovering high development or tooling costs—then the high sounding operation of 'giving the patent to the public' becomes a completely useless gesture, regardless of its political appeal. In fact, it is worse than useless; it is negative. By 'giving the patent to the public' in such instances, it ensures that no manufacturer can pick it up, and the public will not receive its benefit in the marketplace. . . .

"The possibilities of give-aways are in any case probably greatly exaggerated. Government developments usually come in the military or space 'cost-is-no-object' category, and much further development is needed before products can compete in the extremely cost-conscious civilian market. On balance, the public is more likely to profit in the long run from a policy encouraging the further development for the civilian market, rather than one which tends to freeze a development at the governmental cost level. Here, as in many cases, the time proven adage applies that 'everybody's business is nobody's business.'

"For this reason I feel that the burden of proof should be on the government to show that the public would really profit in some manner by a patent not given to the contractor.

"Another of the areas of major controversy, according to current literature, is that involving the individual inventor and his incentives and rights. As one extreme we can read that under modern conditions all inventions are team inventions, so that the individual inventor and the patent system are no longer needed. This is indeed patent nonsense! The individual inventor is still as important as ever. Xerography by Carlson and the Electrolytic capacitor by Ruben are examples of such contributions made well after the era of large-scale laboratory R&D was begun. Creativity is a very personal thing, and no

matter how large the laboratory, the 'invention' or contribution to the invention is always made by some individual. The team does not make the invention; it is made by a member of the team. For those of us in the business of research and development I think this is axiomatic. . . .

"Does our present patent system provide adequate incentive for an inventor to invent when he is part of a large team? . . .

"The team approach to invention is an effective method for spreading very large risks for very large rewards. In this sense it is no different from other forms of insurance. The inventor who chooses to 'go-it-alone' is the reciprocal of the home owner who chooses not to insure his house. The inventor accepts a long period of low returns in the expectation of high rewards later; the home owner saves a small premium over a long period of time and hopes to avoid the possible conflagration at some future time.

"This is the way it is—but this is not the way American folklore has it. From what I read, the employed inventor 'alienates his stake in possible patents, et cetera, et cetera. . . .' The implication is that his rights are usurped by management and that the incentive to invent intended by the patent system for the individual is no longer effective. However, so long as the patent system provides the incentive for management to encourage its employees to invent, what has been lost?

. . .

" . . . I would now like to give my reaction to some of the more critical aspects of the proposed new patent law. . . .

"No doubt the President's Commission did make some study of these matters, especially taking into account European experience. But in recommending a change to the 'first-to-file' concept the two main justifications given seem to be (1) convenience for the Patent Office and (2) the tacit assumption that 'the first to file is more apt to be the inventor who first appreciated the worth of the invention and promptly acted to make the invention available to the public.' In my opinion the first of these should not be controlling and the second argument is certainly not convincing. . . .

"Now suppose our enthusiastic inventor continues to follow developments in the literature and elsewhere, and files for a series of paper patents approaching closer and closer to technical feasibility. At some point long before the experimental work necessary to prove commercial practicality is finished, a first-to-file patent may be granted to our paper inventor. Is he to receive royalties from other inventors or companies who took the time and trouble for actual reduction to practice? Would it be just that the actual inventor should be denied the right to use the results of his own extensive work by someone who had done much less much later? . . .

"In conclusion and in summary, I wish to be on record that I feel that our present patent system and procedure has served us well and promises to continue to do so. Evolutionary changes certainly may prove to be desirable, but even such changes should be made with due caution. The overall objective must be to handle fewer and more significant claims more justly—rather than a high volume of weak claims more conveniently. Compared to other activities on which much government money is now being spent, the cost-effectiveness of our patent system, measured in returns to the economy and therefore to the tax-paying citizen, is very high indeed."

SYNOPSIS

Presentations of invited contributors will be set forth as separate papers. This format is intended to package the contributions of individuals as discrete, easily discernible units to permit the reader to appreciate and to utilize more effectively the very wide information content of the Conference.

Something of the scope and variety of viewpoints presented at the Conference is evident in the following summaries. These summaries were submitted by a number of participants when they returned their edited Conference remarks for publication, and we print them in accordance with our custom. It is our purpose to have them convey some of the spirit and drama of the Conference. We hope what the participants say in this synopsis will encourage our readers to turn for closer study at their leisure to the actual presentations and discussions.

Barry M. Bloom, Director of Medicinal Chemicals Research at Charles Pfizer & Company, Inc.

"The research process leading to new drugs is becoming increasingly complex, expensive and time-consuming. In view of the importance of this type of research, the somewhat unique patent protection needs of those engaged in it warrant consideration in any proposed revision of existing patent law. It is argued that a first-to-file system, such as that proposed in the Patent Reform Act of 1967, places unnecessary time constraints on the process of new drug development which fail to serve either the public interest or those of the inventor. It is suggested that a longer time period needs to be provided for proper delineation of complex chemical inventions, prior to any mandatory publications deadline."

Richard R. Walton, Independent Inventor, gave a brief description of his field of interest and method of working with large companies as an independent inventor.

He presented strong arguments against the first-to-file clause in the Patent Reform Act and explained in detail how our present system allows an inventor, with *reasonable security*, the *time* to perfect his invention, to test in practice, to develop good patent applications and to decide on foreign filing.

He found it difficult to understand how we could contemplate discarding the present system of rewarding the real inventor and to replace it with a system wherein the requirement is simply to win the race to the Patent Office.

John C. Green, Project Leader on the Research Staff of the PTC Research Institute and formerly Director of Analysis and Research, Office of Emergency Planning, Executive Office of the President.

"The research administrator is the company officer who is charged with bringing new ideas forward which will contribute to his company's growth. In carrying out this objective he strives to provide his staff with a creative environment. One element of this environment which is highly valued by scientific personnel is the opportunity to talk and write about their efforts.

"If certain of the Commission's proposals are enacted into law most research administrators will have to 'rethink' their policies and procedures. In particular the ability of the professional staff to participate in scientific meetings or to write for publication will require re-examination and new guidelines. Related to these matters the problem of 'information transfer' as personnel seek new employment may be even more serious than today.

"Separately one can expect the administrator to direct that more applications be filed than heretofore. Early decisions on when to file will deprive him of practical information concerning the value of the invention. This is gained in the time-consuming stages of development and testing. Without information as to the most useful and practical embodiment, he'll recommend filing on a number of variations as a hedge against neglecting the one the company will want to produce.

"A last observation based on long years of working in the field of electronic storage and retrieval: The Commission's recommendation relating to total mechanized search should be viewed as a long range goal. It would be disastrous to anticipate or plan for such equipment to solve the Patent Office's problems in the next decade. That solution will require a good supply of well trained Examiners."

Gerald J. Mossinghoff, Director of the Office of Legislative Planning, U. S. Patent Office.

"The challenge to be met in the development of an intellectual property system for greater social progress has two aspects: To design a patent system which inherently achieves the constitutional purpose of prompt public disclosure and use of new technology; and to insure

that such a system will facilitate the interchange of new technology across national borders under an effective incentive system of legal protection. The dual nature of this challenge is developed in the context of the more significant and far-reaching of the recommendations of the President's Commission on the Patent System. To conclude, these recommendations, including the controversial first-to-file provision, complemented by the efforts toward closer international cooperation in the patent field, will meet the challenge."

T. Hayward Brown, Chief, Patent Section, Civil Division, Department of Justice.

"The President's Commission has proposed patent legislation which would impose burdens on litigation both within and outside of the Patent Office. No doubt, some of the changes proposed would improve the system and some would make it more expensive.

"The abolition of interferences and the institution of a first-to-file priority system probably will not accomplish the objectives planned when it is complicated by preliminary applications. The suggestion that an inventor could prepare an adequate preliminary application appears to be based upon wishful thinking. Preliminary applications would present new problems. In determining the earliest filing date, several preliminary applications might have to be reviewed by the Examiner and later by the courts. The cost of this procedure might be comparable to that of retaining interferences. The third-party opposition and cancellation procedure proposed, while superficially appearing to fulfill a need, probably will not be availed of in many cases.

"There are several features of the proposed bills which are quite desirable. Trial dockets may be shortened and expenses lessened by the appointment of Civil Commissioners (§757), similar to those appointed by some district courts. The worldwide public use or sale defense (§102[a]) reflects the rapidity of modern communication and transportation, but it probably would make patent litigation much more costly in many instances. Instead of increasing the number of applications filed in the Patent Office by inviting myriads of preliminary applications it is believed that attention should be given to finding ways of reducing the number of applications filed and processed."

Albert C. Johnston of Keith, Johnston and Isner.

"Many of the problems in our patent system come from the inability of anyone to know with reasonable certainty that all the pertinent evidence is considered in the determination of a question of patentability. No remedy for this basic problem is found in the recommendations of the President's Commission, although some improvement might ensue from recommended procedures for the publication of applications before rights are granted and for the cancellation of patents after issue.

"Determinations of novelty and nonobviousness require findings of negatives which concern all of man's past endeavors and the current affairs of great numbers of people. Findings of this nature are limited in reliability to the fullness of the frame of reference, or considered evidence, upon which they are made. Thus it is impossible to establish an asserted fact of novelty or nonobviousness or patentability except as it may be settled by a rule of law applied to an absence of contradictory evidence. Yet, the proposed Patent Reform Act would seem to require the impossible in that, according to the President's letter of transmittal to the Congress, 'in every case the inventor would be required to show that his invention is really new.' No inventor can do this.

"The proposal to extend the range of prior art to prior knowledge or use anywhere in the world would greatly increase the uncertainty and the problems of enforcement of patent rights. No patent could be confidently accepted as being valid without worldwide investigations. The expense of discovery proceedings in foreign countries could easily make infringement suits unbearable to many litigants.

"The Commission's recommendations would tend to reduce justice, to increase expense and delay, by creating an unrealistic presumption of correctness of Patent Office decisions on review and by authorizing appeals from decisions of the C.C.P.A. They would work detrimentally, without demonstrated need for such changes, by abolishing the remedial provision for broadening reissues, by placing pretrial proceedings in infringement suits under Civil Commissioners, and by giving *in rem* effect to any decision adverse to a patentee while placing no corollary limitation upon the number of suits to which he could be forced by infringers.

"The Report is commendable in its recommendations to limit the term of patents to 20 years from the effective filing date, to prevent the importation of products of patented processes, and to provide a rule of reason for the determination of misuse issues. Some of these proposals, however, have been omitted or severely limited in the proposed Patent Reform Act.

"All in all, the Commission's recommendations and the proposed Act (S.1042) do not come to grips with basic problems of the patent system; they would work to the detriment of the desirable objectives stated in the introduction of the Report."

David B. Allen, Acting Director, Office of International Patent and Trademark Affairs of the U. S. Patent Office.

"One year ago, at the award dinner of the Tenth Annual Public Conference of this Institute, David Sarnoff, Board Chairman of RCA and distinguished recipient of the Kettering Award, made the following statement: 'One of today's principal challenges is to design an international patent structure that can accommodate the revolutionary

changes in technology and spread its benefits more evenly around the world.

"Through the tremendous advances that have been made in one aspect of this technology—in communications—the physical means are available to accomplish this purpose.'

"I was in the audience when General Sarnoff made this statement and remember noticing the many raised eyebrows and other visible signs of doubt among persons in that audience, all of whom seemed to be saying: 'That's all very good, Mr. Sarnoff, but surely such a goal is today no more than a faint glimmer of hope on the horizon.'

"Nevertheless, in the year which has intervened, there have been numerous developments in the field of international patent cooperation which must, I believe, be recognized as realistic and tangible steps toward the international patent structure which he envisioned. The culmination of these developments was the release of a proposed Patent Cooperation Treaty by BIRPI, the International Secretariat of the Paris Union.

"The Patent Cooperation Treaty was received by the United States just three weeks ago and we promptly arranged for its publication in the Official Gazette of June 13th, so that a full opportunity for discussion by all interested parties would be possible before the next international meeting of experts scheduled for October 2—10 of this year.

"Sometime ago, a patent attorney for one of our leading companies said to us, 'You keep asking us what are our problems in international patents. We all know what the problems are. What we want to hear about are solutions.'

"Certainly, none of us are naive enough to believe that promulgation of the proposed Patent Cooperation Treaty would be the end of the road. However, it seems to us it represents substantial progress along the road toward General Sarnoff's goal. It is a framework within which the farther reaching universal patent concepts can be built.

"How soon these eventual goals can be achieved depends, you may be sure, on how strongly we believe in the statement of David Sarnoff that, 'It is now technically feasible to establish a universal patent system, utilizing the latest communications devices and concepts to bring swiftness, order and reasonable uniformity to the entire patent structure.'

"To those of you who continue to experience a 'raising of eyebrows' whenever these ultimate goals are so boldly stated, I would say that the proposed treaty has been designed to accommodate as many of these concepts as the world is willing to support.

"Even if you are not inclined to believe as strongly as General Sarnoff and others who have echoed his words, in the present feasibility of such far reaching steps, the Treaty has also adopted the very

practical approach of attacking first those problems which the users of the patent system believe to be the most important."

Malcom W. Parry of the law firm Langner, Parry, Card and Langner.

"The proposals of the President's Commission for amendment of the United States Patent Act can be evaluated in terms of foreign experience with similar patent law provisions. Undoubtedly, the proposals of the Commission were motivated to a great extent by a desire to harmonize United States and foreign patent law. It is submitted however that patent law should reflect national institutions and policy, and that the United States should only adopt law changes to achieve harmony with foreign law if this can be shown to improve the domestic operation of the United States patent system which has been most successful to date.

"The proposal of the President's Commission that a patent be awarded to the first to file rather than the first to invent is the rule in most foreign countries. They have had no domestic experience with our priority of inventorship approach and the difference in law has always existed. In countries where economic competition is intense, the first-to-file system does result in a race to the Patent Office. This has resulted in a different practice in these countries in respect of adequate description of invention. The application disclosure may be general, brief, and to a large extent speculative or theoretical.

"Great Britain deals with the first-to-file race by the practice of provisional applications, and the President's Commission has proposed similar practice for the United States. This is a complicated practice and would introduce into United States examination the problem of ascertaining whether the claims or some claims of a complete application following a provisional were entitled to the provisional filing date.

"If the first-to-file system is adopted in the United States, foreign experience indicates that this will result in a race to the Patent Office and furthermore to operate fairly, it would probably require a drastic change in the U. S. practice with regard to adequacy of invention disclosure.

"The Commission's recommendation concerning prior art would appear to be that novelty would be destroyed by making known to the public anywhere by any means either written or oral or by use. This goes further than the law in most foreign countries. Foreign experience indicates that this strict novelty standard without a grace period inhibits technical publication and discussion and also makes adequate testing of an invention most difficult. Patents can be defeated by oral evidence that the invention was known or used anywhere in the world, and opens the door to abuse and unfairness.

"The Commission proposes that a patent or published application

shall constitute prior art as of its effective filing date and this is said to be a necessary adjunct of the first-to-file system. However, many countries having a first-to-file system do not have this rule, and a patent of earlier date but not a prior publication is only citable as to what it claims.

"Another significant Commission's proposal is the laying open to the public of applications prior to allowance. This practice is not followed by most foreign countries. This practice brings about a disclosure which cuts off the possibility of further filings and also will probably be used to fix the ambit of the invention within the claims as published before the scope and nature of the invention is fully appreciated.

"The foreign experience with the proposals discussed suggests that they would not be beneficial to the United States system and they should not be adopted only to achieve harmony."

John R. Shipman, Director, International Patent Operations, International Business Machines Corporation.

"The recommendations of the President's Commission, having important international implications, are recognized as being designed not for the benefit of foreigners but for the benefit and assistance of the U.S. citizens in obtaining patents both in the U.S. and in other countries where U.S. applications are filed in great numbers.

"The most important of these concerns the first-to-file system with the elimination of the grace period, which has been loudly criticized with all weaknesses, large and small, being extensively explored. It is suggested that the present system also has many weaknesses of considerable substance in this area.

"The recommendations should not be measured solely against an ideal, but considered from a cold, realistic, practical and working viewpoint in weighing the actual benefits and difficulties of the proposed against the present system."

Gerard J. Weiser of the law firm McClure and Weiser.

"The need for harmonizing U.S. patent law with foreign laws should be examined in terms of the U.S. basic economic, legal and patent interests rather than in international terms. Harmonization of U.S. patent laws requires the recognition that foreign patent laws are evolving towards the present U.S. patent system. The trend of these foreign systems should be considered prior to committing U.S. law to a new direction."

Allen D. Brufsky, Research Assistant on the Institute's Research Staff and of the law firm, Berman, Davidson and Berman, described the progress of a continuing project undertaken by the Institute to determine the economic role of trademarks in the American business community.

Roland A. Anderson, Director, Patent Division, U.S. Atomic Energy Commission.

"The challenge, from an economic patent point of view, is 'maximizing utilization,' so that the question to be resolved is 'Would the McClellan Bill promote utilization so as to assure maximum benefits to the general public?'

"The various factual situations of the departments and agencies of the government require that they have flexibility in the disposition of rights. The policy recognition of this was set forth basically in the Presidential Patent Policy Statement of October 10, 1963. The McClellan Bill contains provisions similar in many respects to the Presidential Statement. The proposed McClellan Bill and the Presidential Statement both recognize the equities of the contractor and the government, as well as provide for situations that might warrant special treatment. The two principal differences between the Bill and the Statement, insofar as the utilization of inventions is concerned—are (1) the provision for compulsory licensing of inventions resulting from government contract work; and (2) the grant of authority to government agencies to accord exclusive licenses under certain circumstances. These two provisions would strengthen the expeditious utilization for the general public, so that the McClellan Bill would go far to meet the challenge of making maximum utilization of inventions resulting from government sponsored research."

Robert A. Solo, professor of Economics and Management, Graduate School of Business Administration, Michigan State University.

"The proposed legislation (S.1809 and H.R. 458) poses this alternative: Whether inventions produced through government-sponsored R&D should continue to be controlled by the operating agencies of government, or whether control should be centralized in a new Federal Inventions Administration. The control of this category of patents might, conceivably, serve three purposes: (1) To stimulate inventiveness in government labs and in R&D under government contract; (2) To encourage the *intramural* disclosure and dissemination of invention; (3) To encourage the "spillover" of special-purpose technologies developed through government-sponsored R&D into general use in the market economy.

"Unfortunately the proposed legislation has not evolved as a response to any of these very real challenges. Ideally the control of patents should be integrated into total effort of the operating agency to encourage inventiveness, intramural dissemination and spillover, and, hence, control should ideally be decentralized among the operating agencies. Generally the rational control of patents as part of such an integrated agency policy has not evolved; and the orientation of the agency may be such that it is unlikely that it ever could. Inasmuch as

that is so, there is indeed a case for centralizing patent control in an independent Inventions Administration."

Sidney A. Diamond, of the firm, Kaye, Scholer, Fierman, Hays and Handler.

"The topic of public performance rights in sound recordings raises important social and economic questions which the current copyright revision program has not yet resolved.

"Music is meaningful to the vast majority only in terms of its performance and this requires the intervention of performing artists. Most people today hear music only in recorded form.

"The present Copyright Act makes no provision for any compensation for the commercial exploitation of a sound recording by public performance. The revision bill recognizes sound recordings as independently copyrightable works and would protect them against unauthorized duplication, but it specifically denies the right to control performances of the sound recording. A proposed amendment would provide for the payment of a reasonable royalty for the public performance of sound recordings, with the proceeds to be divided equally between the phonograph record companies and the performing artists.

"The increased mechanization of musical performances has progressively reduced the opportunities for employment of live musicians. Moreover, it seems unfair to permit radio broadcasters, juke boxes and other commercial enterprises to continue to take a free ride on the products of the phonograph record manufacturer by generating income for themselves completely out of proportion to the nominal cost of the record itself.

"The trend abroad has been toward recognition of public performance rights in sound recordings as part of the individual country's copyright system. There also is an international convention setting up minimum standards for the protection of sound recordings and related rights, which the United States is not in a position to join because of the limitations of our present law.

"These questions should be resolved now, when our Copyright Act is undergoing its first general revision in almost 60 years."

Lauchlin M. Currie, formerly Vice President of Babcock and Wilcox Company.

"Rapid proliferation of technology, leading to so many patents in a wide variety of fields, presents to industrial management varied types of patent problems. Improved documentation, computerization and rapid worldwide transmission of new information—all present new problems to management that require timely decisions.

"To meet some of the current and developing problems *re* patents, the Presidential Commission has made a study and produced a report leading to the so-called Patent Reform Act of 1967. This proposed new

Act appears to solve some problems, ignore some, and to introduce some new ones!

"The so-called 'first-to-file' procedure is recommended in the hope that it will improve international uniformity in practice. It will, undoubtedly, meet some industrial opposition.

"Several amendments proposed by Sen. Long (Mo.) will be of great help if included in the Act as finally passed. Of particular importance is the amendment that more clearly defines to what uses a patent may be put. It is needed to help clarify the situation and difference between patent law and current antimonopoly actions.

"The roles of management and patent counsel become increasingly important in the handling of patents and patent policies. The patent policies of many companies have determined the operation and ultimate success of many corporations. The basic decisions in establishing these policies have required careful studies of many factors. These are generally well known but are increasing in numbers and complexity. Extreme legalism may promote more patents than inventions."

Robert L. Wells, Vice President, Engineering, of Westinghouse Corporation, discussed the business environment in which product engineering work is done in industrial corporations. He stressed the need for attention to the customers' functional desires and the corporation's need to be financially successful.

After reviewing internal patent procedures and practices in his company he cited three significant aspects of the proposed patent law which will require changes in the *modus operandi* of organizations such as his. He cited the significant reeducation problems internally in businesses if the proposed law is passed in its present form.

Professor S. Chesterfield Oppenheim, Adviser on Research of the Institute and Professor Emeritus, University of Michigan.

"A constant deficiency in evaluations of the United States patent system is the wide gap between theory and factual information, between abstract generalizations and empirical data. The Patent, Trademark and Copyright Research Institute was created to help narrow that gap. The Report of the President's Commission on the Patent System invites, indeed obligates, the Institute to adapt parts of its research program to studies designed to gather and evaluate factual and empirical material relevant to selected phases of the Commission's Report. The Institute has accordingly projected and announced such studies.

"These objectively oriented research activities are similar to past studies the Institute has constantly undertaken since its inception more than a decade ago in its quest for truth and understanding about the patent system, letting the chips fall where they may."

*Improving Industrial and Intellectual
Property Systems for Greater
Social Progress*

The Proceedings of the Conference

Thursday, June 22, 1967

The Eleventh Annual Public Conference was convened at 9:00 a.m. L. James Harris, Director of the Research Institute and Professor of Law, the National Law Center of The George Washington University, presided. He introduced Robert Kramer, Dean of the National Law Center of The George Washington University.

Welcome

ROBERT KRAMER

Ladies and gentlemen, it always has been a puzzle to me exactly what one is supposed to say on such an occasion as this. Obviously, I am not a part of the program. I am not a patent lawyer nor a trademark or copyright specialist, as all of you are.

I suppose in a way the main justification for my place in the

program is that it is early in the morning, and most of you need five minutes' leeway or so and I sort of kill that five minutes and give you time to wake up and get seated and get ready to participate in the discussion.

Seriously, as Dean of the National Law Center, it is a great pleasure and privilege for me to welcome you this morning to the Eleventh Annual Public Conference of The Patent, Trademark and Copyright Research Institute. You have a long program ahead of you. This is the first time since I have been Dean that I have had the privilege of being here. One thing I have noticed in the short time that I have been Dean and had the pleasure of becoming acquainted with the work of the Institute is how much the Institute owes to the work of its devoted Director, Professor Harris.

The more I become acquainted with the work of the Institute, the more I appreciate how much his devotion and work means to the Institute and to its programs.

I am not going to take up any more of your time now. I hope you are all wide enough awake for me to say again, welcome.

Thank you. (Applause)

Introductory Remarks

L. JAMES HARRIS

My remarks are intended both for our new friends and for you hardy ones among our old friends who despite conference fatigue and the pressures of work resulting from numerous absences from your offices to attend the unusual number of conferences held this year throughout the country on the Presidential Commission's Report, have come to comingle your accumulated wisdom with that of the Institute.

To all of you I want to express our appreciation. I also want to brief you at the outset—in order to make this joint educational effort most effective—about the unique background of the Conference format, including relevant research of the Institute, and about our objectives.

During this past year, a most significant report and four important or potentially important pieces of legislation have been introduced, have received increased attention, or have been acted upon in the Congress in the Institute's areas of interest:

- (1) The Presidential Commission's Report on the patent system was issued and legislation stemming therefrom was introduced;

- (2) Renewed interest was manifest in legislation on government patent policy pending in the Congress;
- (3) The Copyright Revision Bill passed the House; and
- (4) A bill was introduced amending Section 43 (a) of the Lanham Act to provide a federal law on unfair competition, including a provision covering trade secrets.

Moreover, this year has seen a great increase of discussion concerning harmonization of our industrial property laws with other countries, stemming in part from the Kettering Award Address given by General Sarnoff last June at our Tenth Annual Public Conference.

With respect to proposed legislation: The Institute has continued its reports on government patent policy from its pioneer research report by Professors Watson, Bright, and Burns published in Volume 4, Number 4 of *IDEA*. With ever larger appropriations for military and space research, the apparent cooling down of the Congressional debate on this question may be deceptive and the Institute, accordingly, continues its interest. If you will turn to your programs you will see that in Session II, Part IV we will consider whether "Proposed Legislation on Government Patent Policy Will Meet the Challenge?"

For some time now, the Institute has been seeking information on subject matter very relevant to unfair competition. Since its inception, the Institute has included the subject of trademarks in most of its research studies and for the past year or so has undertaken a project related exclusively to trademarks. Dr. Siegel, a senior member of our Research Staff, and I have also been engaged on a study of trade secrets. Although the unfair competition legislation does not have the momentum generated for some of the others, if it should catch the Congressional fancy, it could involve some major changes in the law. Moreover, the Research Program Committee of our Advisory Council placed studies on trademarks and trade secrets high on the recommended list. In the Second Session, Part II of this Conference we will consider whether "Proposed Legislation on Unfair Commercial Activities Pertaining to Trademark Identity and Trade Secrets Will Meet the Challenge?"

With respect to increased international interest: The pioneer work the Institute has done since its inception on foreign licensing and international transactions, as well as its current studies on the role of industrial and intellectual property in the EEC; taxation of the foreign licensor abroad; and the international outlook on industrial property in Latin America, in Soviet Bloc countries, and in Japan has received recognition here and in other countries.

With the advent of the Presidential Commission's Report on the

Patent System, the Institute's Research Program Committee recommended that the Institute direct its attention to aspects of this report that could be constructively studied. The Institute is taking account of the Commission's Report and has notified the membership at large of the research it is conducting which bears on the Report.

For example, the Institute is presently engaged in an analysis of factual experience under foreign industrial property systems already having characteristics similar to proposed changes in the U.S. system. This study, as all the Institute's ongoing studies bearing on the Presidential Commission's Report on the Patent System, is being conducted by means of interview, questionnaire, and literature search.

I am planning a series of interviews with government officials, private practitioners, and business executives in five European countries during the month of July. I have also organized and will moderate the Workshop on Industrial and Intellectual Property at the World Peace Through Law Conference in Geneva at that time. Not only will this enable the Institute to actively participate in the Geneva Conference, but these meetings will give me an opportunity to interview foreign participants at the Conference, who would otherwise be unavailable, to solicit their experience under those aspects of their systems that are similar to proposed changes in our own, as well as with respect to other international arrangements of interest to Americans.

Incidentally, the theme of the Workshop on Industrial and Intellectual Property at the World Peace Through Law Conference in Geneva is "Improvement of the International Role of Industrial Property with a View to Transferring Technology to Developing Countries As a Means of Accelerating Their Economic Growth." If patent protection can induce investment in and the transfer of technology to the lesser industrialized nations, these nations can achieve a higher standard of living and a greater stake in material goods. If these countries will have something tangible to protect, they might be less inclined to take risks. Moreover, industrialization should increase the national confidence and pride of smaller nations. The resultant desire for these lesser industrialized nations to protect their property and their newly acquired industrial status may provide a strong psychological force for world peace.

As we have reported in Institute research papers and stated in our previous public Conferences, capital assistance requires for its success a certain level of technical expertise in the execution of projects and that for most lesser industrialized countries the attainment of this level requires the infusion of new techniques and skills

from abroad. Foreign private investment most often carries with it a certain amount of technical assistance. The development of the transfer of foreign private investment and foreign inventiveness and innovation is critical. How to accelerate that development through the industrial property systems will be one of the key problems of the Workshop of World Peace Through Law Conference.

Our Institute's analysis of foreign industrial property systems is only one of a series of Institute studies being undertaken that bear on the recent Report of the President's Commission on the Patent System. The purpose of all these studies is to reveal, where possible, the effects on innovation and economic progress of certain major changes in the law proposed by the Commission. The Institute in other studies in this series is questioning experts in the field of innovation comprising

- (1) A random statistical sampling of recent patentees and assignees from whom it is seeking factual information particularly on the significance of the grace period;
- (2) A selected group of recognized inventors to obtain information on any contemplated change in their method of operation due to the Commission's Report and their relevant experience under the present system;
- (3) Administrators of research of major U.S. firms for their relevant contemplated action and past experience; and
- (4) Companies for factual information on trade secrets.

The Institute's published reports will also be reviewed to extract and correlate findings that may be of assistance in evaluating the Commission's Report. In Session II, Part I of this Conference we will consider whether "Proposed Legislation Deriving from the Report of the President's Commission Will Meet the Challenge."

The theme of this Eleventh Annual Public Conference of the Institute is "Improving Industrial and Intellectual Property Systems for Greater Social Progress." In view of the Report of the President's Commission, the implementing legislation, and the scheduled hearings, there have been a rash of conferences and seminars on the Report. The Institute's Conference is distinguished from other conferences and seminars in that its emphasis is on a presentation and discussion of *factual* information by invited contributors and by members of the Research Staff. The Institute seeks at these Conferences not alone to teach, to provide factual information for the publics attending, but also to derive guidance on planning its future programs and additionally, and of equal importance, the Institute's Conferences serve a staff function for those who require factual information for sound decision-making. The emphasis of the Conference this year is as

the theme indicates — on improving the systems for greater social progress. This is in line with the Institute's objectives in that the Institute is seeking to work out a technique for tapping the experience of knowledgeable people to present their ideas in a broad forum with the Institute as the interface, moving forward, not by protecting the status quo but by making the system's evolution vital and meaningful. Our last two Annual Public Conferences were directed primarily to providing a data base for the President's Commission on the Patent System. Now that the Commission's Report has been published this Conference, in a broad sense, is intended to provide perspective. The Conference will analyze proposed legislation for the relationship to economic, social, and cultural advancement. It will be considering legislative needs in the light of the public interest, recent court decisions, existing company situations, and the international challenge.

The Conference you will note is divided into three sessions. The First Session will present the *problems* and *issues* by research people on the frontiers of R&D. The Second Session will consider *solutions* by specialists who are expert in intellectual and industrial property. These two sessions will form the two sides of the triangle for the apex, the Third Session. The Third Session is concerned with *management decision-making* based on the problems and suggested solutions offered in the previous two sessions. Lawrence R. Hafstad, General Motors Vice President in Charge of the corporation's research laboratories and a former Chairman of our Advisory Council, will be presented the Kettering Award at a dinner in his honor this evening. In developing this Conference program, we have tried to give you a closer look at the Institute's unique organization by including as many representatives as possible from its Research Staff, its Council, its committees, and those associated with the Institute.

In closing, let me emphasize that the Institute's basic endeavor is to shed light on the operation of the patent and related systems of the United States and other countries. Thus, the information we collect and the information presented here will become, through the medium of the Institute, a part of the nation's knowledge about our industrial and intellectual property systems. This information is made available in *IDEA*, the Journal of the Institute and in our other publications.

The scope of our research is quite broad as is demonstrated by the subject matter which we plan to discuss at this Conference. The information that we develop here today, I know, will be of great interest to our researchers and of great importance to those who must make the decisions relating to the improvement of our industrial and intellectual property systems. (Applause)

FIRST SESSION

Protection Needs in R&D

DIRECTOR L. JAMES HARRIS: Turning now to our first session this morning, "Protection Needs in R&D," I regret that Dr. Carl Kaysen will be unable to be with us. His secretary phoned me yesterday and informed me that a personal matter required his immediate attention, and she asked that he be excused. Fortunately, despite the short notice we were able to obtain the services of a very able gentleman who recently migrated to Washington from Boston. Dr. Milton Harris has very courageously accepted our invitation and will act as Moderator. Dr. Harris is a former Vice President of Gillette Company and Chairman of the Board of the American Chemical Society.

It gives me great pleasure to introduce Dr. Milton Harris, the Moderator of the initial session of the Conference.

DR. MILTON HARRIS: Thank you, Mr. Chairman, ladies and gentlemen.

It is a real pleasure to be able to join my many friends and colleagues in an area in which all of us have been very much involved and interested over the years. The whole subject, as noted in the

keynote of the meeting—"Improving Industrial and Intellectual Property Systems" and particularly the topic we are concerned with this morning, "Protection Needs in Research and Development"—I think is particularly timely for a number of reasons.

First, I think you will all agree with me that science and technology are in a stage of what one might describe as a quite violent transition. This is true in government, industry and the university.

Secondly, I think this is important because, for better or worse, we are committed to a certain rate of economic growth. What the actual rate should be is not clear, but it is certain that all of our major programs dealing with security, health and welfare, education, support of the sciences and technology, are based on such growth.

I don't like to overemphasize the contribution of research and development to economic growth. Sometimes there is a tendency to overestimate these contributions, but certainly most economists agree that of the long list of things contributing to growth, such as labor, capital, and many others, research and development in the form of new industries, new products and new processes certainly heads the list.

But now I think we are entering what I would like to call Phase III of the science revolution, a period which I often refer to as a period of consolidation on contemplation; a period when we really should be asking ourselves where we have been and where we should be going.

I think it is particularly important, therefore, that we explore today whether the legislative processes dealing with the appendages of research and development are really keeping pace with changes that are being brought about in our society by science and technology.

With a subject as important as this, and with as eminent a cast of characters as we have to deal with the various aspects—and I happen to be able to tell you that I do not know what their specific assignments are, the chairman has to exercise due diligence, and not get caught in the position of a chairman at a meeting where Thomas Edison was being given one of his many awards for his work.

There was a large group of people from all phases of society and the chairman got up and said something like this: "Ladies and gentlemen, we are gathered here to honor and recognize one of the great scientists and inventors of our time. He invented the talking machine." He said, "He was a self-educated man—and then he got carried away with how Edison educated himself while he was selling books or newspapers on the train.

Some ten minutes later he said, "He invented the talking machine and the incandescent bulb," and then he got carried away with the

contribution of the incandescent bulb to our society, and ten minutes later he said, "He invented the talking machine," and he mentioned other inventions. Some 30 or 40 minutes later he said, "Ladies and gentlemen, it is a great privilege to give you Thomas Alva Edison."

Mr. Edison got up and said, "I feel very humble at that great honor being bestowed on me, but before I enter into my formal address, I wanted to make a correction in the introduction. I did not invent the talking machine. God invented the talking machine. I developed one you could shut off."

Having told that story I did not intend it as an admonition for the members of the panel—but there is a rather full program and I always personally look on meetings of this type as one where the speakers are the catalysts and allow enough time for discussion.

With that, I would like now to introduce the speakers. No material was given fortunately, because you know all the people and to give introductory speeches about the members on the panel would be about as redundant as the experience of the two women who met on the street. One said to the other, "You have been traveling a great deal, haven't you," and the other said, "Yes, we have been flying every place—by air."

First I think it is fitting we should start with Professor Charles Draper. He is Director of the Department of Aeronautics and Astronautics at the Massachusetts Institute of Technology. There are no listed topics for the speeches.

Professor Draper.

CHARLES S. DRAPER

Thank you, Mr. Chairman.

The proper subject for my talk is not clear in my mind beyond a feeling that among the distinguished individuals listed as my companion speakers, I am comparatively well qualified to draw from my some 35 years of experience in research and technology. My billing on the program is incorrect, I still retain my position as Director of the Instrumentation Laboratory at the Massachusetts Institute of Technology but as of July 1, 1967, I have retired as an Institute Professor and Head of the Department of Aeronautics and Astronautics.

My basic concerns have been people, my first degree some 45 years ago was in psychology, and innovations of various kinds have always been my objectives. Teaching has been my greatest challenge with attention on the best ways to transfer ideas and to stimulate increased contributions from potentially creative people.

People that have new and pioneering ideas can contribute to the various aspects of our society. I feel very strongly about this because knowing something about the world environment within which we now exist, I am sure that our continued progress—and I personally feel our survival—depends on maintaining a balance of capabilities vis-à-vis potential “non-friendly” societies. I have chosen in addition to education, research, development and technology as my primary interests. Most of my work has been carried out either directly or indirectly in the pursuit of solutions for government problems.

The Instrumentation Laboratory started from my activities at the Massachusetts Institute of Technology in about 1930 with no more than two or three people and minimal support, circumstances which forced me to depend upon second-hand machines and materials purchased from my own rather low salary. Today the Laboratory has a staff of some 2,000 or 2,500 people and a budget in the vicinity of \$50 million a year. Many people think that these resources have the form of grants for me to use as I please. I assure you that this is not the case; all our efforts are covered by contracts with specifications, schedules and delivery dates except for some small provisions for exploratory research. The Laboratory deals with projects such as the design of overall guidance systems for the Apollo trip to the moon and for follow-on systems that will be needed after the moon mission has been accomplished. Our endeavors include guidance and control systems for ballistic missiles, guided missiles, submarines, other underwater devices, and systems for flying machines ranging from helicopters, VTOL's, supersonic transports and other vehicles moving in three dimensions. Nobody realizes better than myself that these activities represent a very special area of activity.

However, I have benefited from wonderful opportunities to study, as a participant in events, the environment of rules, regulations, laws and all the other constraints and resources that are associated with modern research and development. My positions as faculty member, department head and laboratory director have made it possible for me to improve my understanding of the ways by which our society encourages and uses the talents of creative individuals. One of my overall impressions is that of amazement at how well the United States patent system has worked and how it continues to operate.

I was a member of Dr. Herbert Holloman's so-called CTAB, the Commerce Technical Advisory Board, when it was first organized and I continued to serve for some four years. This group carried out many important studies and produced a number of valuable recommendations. It fell to my lot to act as the Chairman of the CTAB Panel on the Patent System. I have also been fortunate in my contacts with inventions, patents and innovations as the Chairman of the National Inventors Council, a position to which I succeeded after the death of Boss Kettering of General Motors.

Details of the experiences that have come my way because of these positions are not pertinent here and perhaps some of them would tax your belief. Membership for the CTAB Panel was drawn largely from among leading inventors both independent and associated with organizations. The Panel also included lawyers, directors, managers and government personnel associated with inventive activities. My primary goal as chairman of such groups has always been to insure good, direct communication with creative people having capabilities proved by achievements associated with invention and innovation. Beyond this, understanding based on such communication and the development of reasonable opinions have been the objectives of free and open discussions.

During the past decade many changes have occurred in the National Inventors Council. These have added up to an overall shift in emphasis from providing help for individual inventors to a search for ways in which the contributions of creative individuals to our society may be increased. The "Patent Panel" of CTAB among other things recommended the establishment of the Presidential Commission on the Patent System which is now in existence.

Here, I would like to repeat that all my experience has resulted in the already stated opinion that our patent system is remarkable for the very great role it has played in the development of our country. Patents started from a desire to stimulate inventive contributions by offering special benefits to individuals who confer innovative benefits on society.

From this simple beginning a system has developed into a complex which defines rights associated with intellectual and industrial property, protects values of such rights and serves as the basis for orderly economic operations. The result is an environment within which the greatest advances of mankind have occurred and are still in progress. This is a most remarkable state of affairs. Changes in the laws and rules that govern the existing system should not be made unless significant new benefits are very likely to be gained. The currently

proposed patent legislation has little resemblance to the form that we of the CTAB Patent Panel hoped it would be, but the discussions that have been stimulated are certainly excellent from the standpoint of clarification for many issues that are often both controversial and vague.

One matter of interest here is the position of the National Inventors Council with respect to the proposed patent legislation. A number of people have expressed disappointment with the council because its opinions did not seem to reflect the ideas of individual inventors. Actually there has been a great deal of discussion, literally days on end, among the members of the Council. Opinions have been encouraged from all standpoints without stress on reaching unanimous agreement and with dissent being accepted where it appears.

The desirability of a group such as NIC supporting proposed legislation could very well be a shadow influencing the Council's opinions. I assure you that pressure of this kind was not a factor in discussions of the issues at stake. In addition to open meetings of the full Council, there is a special panel chaired by Larry Biebel that has produced two draft reports. Actually a final report does not exist and anyone who feels that the National Inventors Council has an accepted position at the present time does not understand the situation.

The Council has not one opinion but many opinions. I have watched what you might call the center of gravity of thinking shift one way and another with improved understanding as the various pieces of information are assimilated. I have on my desk a new draft report from Larry Biebel who is still trying to determine what the current trends of thought may be and how this may be described in a generally acceptable paper. Without trying to anticipate Larry's final paper I can remark that the present systems look better and better to active inventors so that perhaps significant changes should be made only after very careful consideration.

It appears that I am the person on today's program who is primarily concerned with research and development for the government. The work involved is carried out for the Navy, for the Air Force, for the Army, for NASA, for the FAA, for the AEC, and although in a number of cases the work is actually contracted from a commercial concern, the company involved generally receives its support from the government.

Through the years I have come to be sure that the protection needs for operations like those of the Instrumentation Laboratory are not directed toward stimulation of innovation, invention and creativity in the individuals concerned. The protection needs are there for the basic

purpose of protecting ideas and results so that rights derived from activities supported by public funds are controlled and, in some cases, owned by the government. The contracts involved usually include words that provide for commercial use of ideas when conflicts are not involved. In my own Laboratory no substantial industrial activity has appeared, although it now seems that some of the ideas that were developed by Laboratory projects are showing up in commercial applications.

The problem is complicated for government R&D by the fact that secrecy classifications are often necessary. It is impossible to depend on the revelations of patent applications to protect the government. Unauthorized users of inventions would be helped, not restrained, by published patents no matter how valid these might be in law. My own experience has included a number of instances particularly during the early 1940's with fire control devices to help gunners destroy enemy aircraft from ships and fighter airplanes. An organization such as my Laboratory is not a job shop in the sense that it waits for somebody else to define the problems; it carries various areas of technology ahead by internal initiative without instructions from outside. The staff of the Laboratory is always concerned with science, which studies the environment for the purpose of improving human knowledge without thought for particular applications of this knowledge. The staff is also primarily involved with technology which is the active, purposeful, and responsible modification of situations in nature to make them more favorable for the needs and desires of society.

I have no argument with the principles involved, the public must be protected in the sense that, if the government supports an activity, it should have rights to the results derived from this support. However, I personally feel that perhaps in some cases it is going too far for the government to take over all rights that may have existed or are developed in activities associated with sponsored projects.

Problems of this kind are not important in my Laboratory. I feel that patent protection should be developed for R&D activities such as mine which are directed toward progress in ideas useful for the purposes of technology. We do not stop with the development of ideas; we actually design, build and test hardware. Some of you in the audience know that out of the Laboratory, during the past 20 years, have come ideas that have actually provided industry with several billion dollars of business. In this country today there are probably a half a million people working in the general area of technology that have been started by the Laboratory. Industry which deals directly with the government gets the benefit of each and everything that we

may do without any direct returns for MIT or the Laboratory. I recognize that this state of affairs is necessary and that our endeavors help to improve the overall industrial health of the country.

The Laboratory starts with ideas like the anti-aircraft fire control of the '40's, or inertial guidance for ballistic missiles of the '50's, or space guidance for the vehicles of the '60's, and produces technology to be proved under the conditions of operation. The various patent applications that have resulted were put under secrecy and it turned out that I, who on the record had made many of the basic contributions, was the one person who could not under any circumstances discuss the ideas disclosed by the inventions either in papers or in lectures to my students. I was forbidden even to tell my classes about the generalizations involved in some of the devices that were developed. I am very cheerful about this because I recognize that it was necessary. Actually the principles involved were far broader than the limited field of fire control and it turned out that several sections of theoretical, mathematical activity started from work accomplished in the Laboratory.

In certain basic fire-control systems the first patent applications were submitted in the early 1940's and the 17-year life period for patents was gone before classification was released. Of course, in the meantime, with the general development of technology, items that held great interest in 1940, were old hat in 1957. Events of this kind are inevitable and must be accepted. I see that there is no way that I as an inventor of classified devices can be given a patent-type incentive to create.

In my own experience I find that I am so busy trying to keep ahead of current problems that there are no longer chances to sit down and think of pure research or patents. I do not have specific statistics but there is some satisfaction in the record that the government has never been, so far as I know, brought into a situation where litigation was involved on any of the fundamental items worked on by the Laboratory.

Individuals who deal with these problems and work under the circumstances existing in a laboratory involved with government research must as a condition of employment—and I have listened to arguments on this point for a long time—sign a patent agreement, so this effectively removes from the individual's mind any considerations of being motivated by patent-right incentives that he might receive as a result of his efforts.

This is not as bad as one might think, because in practice when an individual has a good idea, and he feels that the time is ripe, he leaves sponsored research and starts his own industrial activity. The Instru-

mentation Laboratory has been the subject of various studies by the MIT School of Business Management. These studies show that some 50 to 100 new concerns have started from beginnings in the Laboratory. This is an inevitable manifestation of the principle that our society rewards innovation rather than invention.

I do not think that the legislation based on the report of the Presidential Commission would change the status of creativity in government research. Individuals are not now protected by patent rights. If new legislation were passed, workers would build up backgrounds of information and leave the laboratories by which they may be employed to start their own company or work for another concern willing to pay well for their special knowledge and abilities.

I have talked a few more minutes than 15. I thank you very much and I will be very glad to argue with anybody on the thoughts I have expressed. (Applause)

DR. MILTON HARRIS: Thank you, Professor Draper. In view of the many controversial discussions that have been in progress in the past months on the proposed patent legislation, I thought you were particularly courageous in revealing you might be one of the forebearers, but I am sure you will do more than hold you own.

Now we will go on with Dr. Barry Bloom, Director of Medical Chemical Research at Charles Pfizer and Company.

BARRY M. BLOOM

In the brief time available this morning, I would like to discuss just one or two of the more important aspects of the patent protection needs of those engaged in drug research and development, especially as they relate to pending legislation on patent reform.

My own perspective on this subject is from a background in drug research, not in patent work, and I shall try to present to you the viewpoint of the laboratory scientist in industry.

My comments will reflect the feeling that at least *some* of our protection needs are sufficiently unusual as to probably have escaped

the attention of those of you whose personal experience lies mainly in other fields.

Let me begin by estimating the part that pharmaceutical inventions play in the overall activities of the United States Patent Office. Recently published Department of Commerce statistics indicate that more than 66,000 patents were issued last year. A government study of the period around 1960 has shown that over 2 percent, and I would think by now possibly more like 3 percent of all issued United States patents involve chemical inventions related to medicine.

It would follow then that something of the order of 1,400–2,000 patents were issued during the last year covering inventions in the drug field, and when you factor in that a number of these relate to important contributions to public health and well-being, it seems reasonable to conclude that the protection needs of inventors of new drugs are deserving of consideration in the drafting of any proposed revision of existing patent law.

The main *source* of all this inventive activity is readily identifiable. During 1966 more than \$400 million was spent by the 77 member firms of the Pharmaceutical Manufacturers Association in an effort to bring safe, efficacious new drugs into medical usage at the earliest possible time.

Drug research in industry is typically conducted by interdisciplinary project teams made up of medicinal chemists, biologists of various specialties, such as bio-chemists, pharmacologists, and micro-biologists, and clinical investigators. The efforts of such groups are focused upon the major diseases of contemporary society—cancer, hypertension, atherosclerosis, rheumatoid arthritis, diabetes, emphysema, mental illness, and the various infectious diseases—health problems of such complexity that each project team has to bring at least a critical minimum of intellectual mass to bear upon its problem if it expects to make any significant progress within a reasonable period of time.

This means that an organization must have a *substantial* corps of senior scientists to deal with its several project interests. For example, the research division of a large American pharmaceutical company can include anywhere from 30 to more than 75 doctoral level chemists. They are commonly the inventors. And you then add the necessary complements of laboratory biologists, research physicians, and supporting scientific personnel, you come up with total drug discovery research staffs at the doctoral level that can approach 300 in number at a single large company.

The cost of conducting research on such a massive scale is not

inconsiderable, as you can imagine. And the risk involved in such research is getting higher all the time

Let us look at the slides. What I have tried to show you on the first slide is the rate over the last ten years at which basic new agents—that is chemical entities not previously employed in medicine—have been developed by the pharmaceutical industry and approved by the Food and Drug Administration for medical use in this country.

As you can see, there has been a substantial decline in the rate of discovery as measured by this criterion. Over the same period of time the research and development costs of the previously mentioned firms have risen more than threefold (from \$125 million to \$400 million).

What conclusions can we draw from this divergence between research expenditures and productivity. I doubt that any compelling case can be made for research being conducted in a less *efficient* way.

The suggestion is made rather frequently that stricter regulatory policy on the part of the Food and Drug Administration policy is responsible. Here again, the contribution of this factor to slowing the rate of drug discovery, although real, *can* be overestimated.

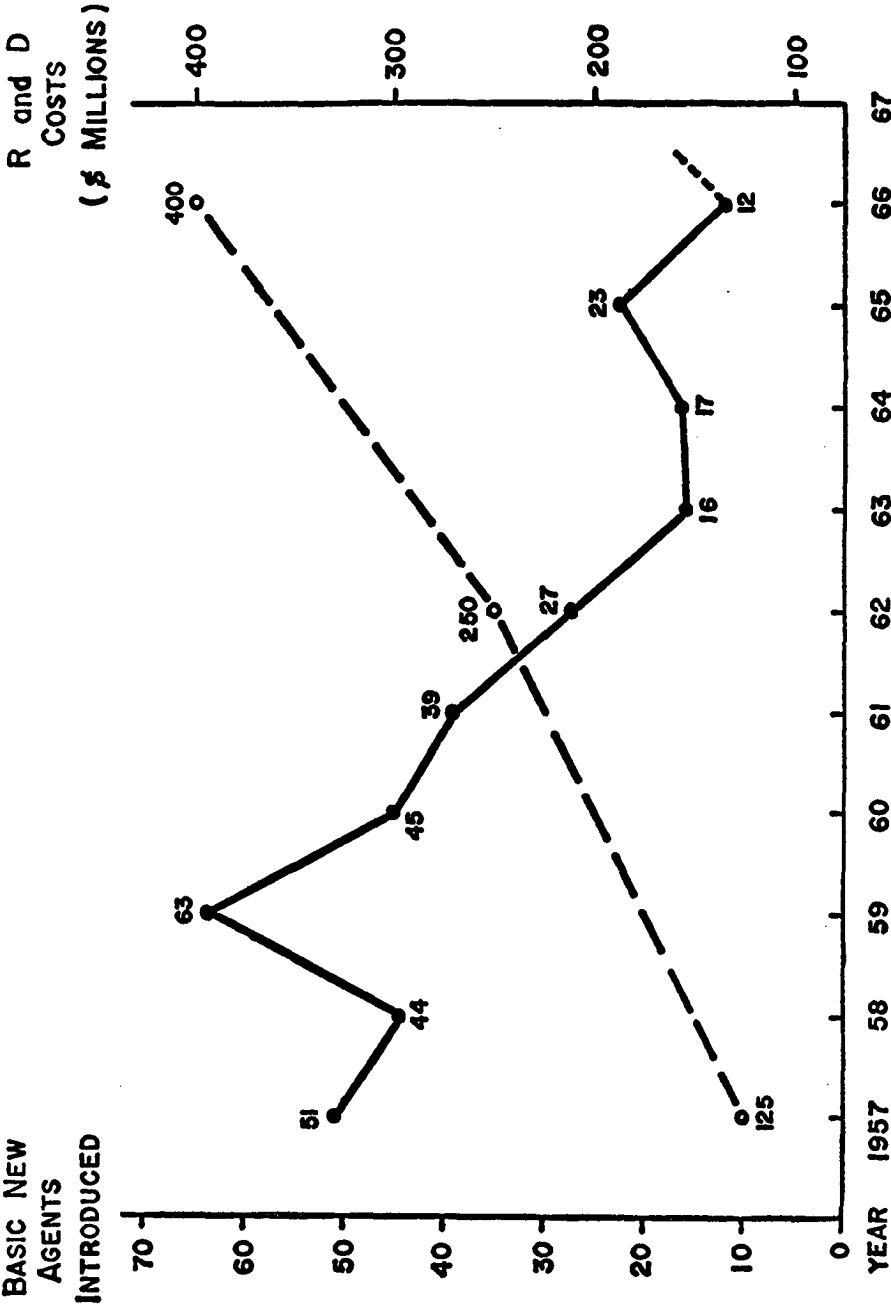
The most significant factor today, in my opinion, is that the pharmaceutical industry is laying a much greater percentage of its total effort against the most difficult kinds of research challenges that it has ever faced.

There is such a paucity of fundamental insight regarding the cause of major diseases, such as atherosclerosis or schizophrenia, for example, that drug research finds itself increasingly preoccupied with knowledge-gathering—basic research, if you will—building the foundations of fact upon which rational drug-seeking projects can be based in the future.

This means an inevitable lengthening of time—and an increase of the cost—to discover and develop a new drug.

Recent publications by industry scientists reveal the trend quite clearly. To cite a couple of small examples of the kind of *fact*-generating research that is becoming commonplace in the industry these days, Upjohn scientists, after much effort, have recently synthesized and made available to the world medical research community for the first time significant quantities of a complex substance known as prostaglandin E₁, believed to be an intracellular messenger, whose important roles in body function can hopefully now be elucidated. Similarly, researchers at Pfizer have recently discovered the first known selective inhibitor of the biosynthesis of serotonin, a ubiquitous regulatory substance, whose significance to mental function and other physio-

SLIDE I



logical processes has eluded the grasp of science for a frustratingly long time.

Since becoming available from our laboratories about a year ago, this research tool has already helped shed new light on behavior and sleep mechanisms, and is presently being studied further in our own laboratories and at the National Institutes of Health here in Bethesda and elsewhere throughout the world.

Obviously, these are not direct efforts at drug development. They are, instead, attempts to spawn new knowledge, from which, hopefully, ideas will spring that will lead to important new drugs.

Even when we consider the research required *after* a new drug has been discovered, we see the evaluation and development phases inevitably taking longer and becoming more costly in the future because we have to deal with such complex disease problems.

Consider, for example, the challenge one faces in attempting to develop an entirely new therapeutic approach to the treatment of atherosclerosis. Existing drugs work by reducing the circulating levels of cholesterol and other fatty substances in the blood.

On the basis of results from large-scale clinical trials, such as the well-known Framingham, Massachusetts study, it has been shown that people with excessively high cholesterol levels are predisposed to heart attacks and strokes. So the prophylactic use of cholesterol-lowering drugs has come into favor with the medical profession for the treatment of coronary-prone individuals.

In order to determine that the drug is having the desired effect on the metabolism of the patient, all the physician has to do is measure blood cholesterol levels before and during drug treatment. But supposing you now want to develop a hopefully superior form of therapy that will prevent heart attacks by blocking the aggregation process that leads to plug or thrombus formation inside a blood vessel—and thereby triggers the actual heart attack. And you have a drug that appears to do this effectively in laboratory animals. How do you evaluate such a drug in man? How do you convince the medical community that this drug has value and should be used in patient treatment?

You are probably faced with the formidable task of demonstrating that treatment with this drug of a large population of coronary-prone individuals over a prolonged period of time will significantly reduce their rate of mortality. I won't even attempt to estimate for you how long such trials would take, but it would clearly be a matter of years.

With this kind of prospect in mind, let us consider the implications

of the Patent Reform Act of 1967. Do the operational details of the proposed new law serve the interests of drug research—or the interests of the public in the results of such research?

In its present form I would have to conclude that it does not. Some of its shortcomings, as they affect chemical technology in the broad sense, have been suggested by the President of the American Chemical Society, Professor Charles Overberger in a recent letter to Dr. Hornig, Secretary Trowbridge and Attorney General Clark.

Commenting for the Society, at the request of the Office of the Commissioner of Patents, Professor Overberger makes the point that in this modern age of complex technology, few chemical inventions can be properly delineated in the short period of time afforded under the proposed first-to-file system, with its mandatory deadline for publication of pending applications.

The Society feels that "the public interest is best served by having as complete as possible a disclosure and definition of an inventor's contribution," and it suggests, in regard to Recommendation VII of the Presidential Commission's Report, that publication of a pending application take place 24 months after filing the *complete* application or promptly after allowance or appeal, or whichever comes first.

The *Commission's* Recommendation VII, you will recall, would have allowed publication as early as 18 months after filing of a *preliminary* application—much sooner, in the opinion of the Society, than proper delineation of the scope of a basic chemical invention can normally take place.

In my opinion this recommendation of the Society makes excellent sense and it could hardly be more applicable to any kind of chemical invention than it is to new drugs.

One might ask *why* is it in the public interest to allow this additional time? I offer the answer: To encourage the most creative deployment of the resources of the drug industry; to encourage a thorough exploration of the scope and significance of basic new drug inventions by the responsible project team.

Time constraints which constantly threaten the inventor with inadequate coverage will predictably lead to an increase in inefficient protection-seeking research tactics that will increase costs and discourage the application of wisdom and deliberation to the selection of drug candidates for ultimate development.

Exploitation of other people's inventions will be encouraged, leading to unconstructive duplication of research effort, especially by those unwilling or unable to undertake high-risk research, who will assume

that the patent coverage to be obtained by the original inventor will be marginal. One end result of this would be more frequent marketing of congener drugs that are just medical equivalents of existing therapy, thereby impeding the progress being made by the American pharmaceutical industry toward improving the quality.

Let me try to show you what the effects of the proposed publication deadline could be on drug research. Keep in mind, if you will, that the Patent Office may require *clinical* evidence of utility as proof of patentability in this field.

What I have shown here in Slide II, in greatly simplified form, are steps involved between making an invention and discovering a compound that has potentially useful biological activity, and bringing a medically purposeful drug to the point of FDA approval.

SLIDE II

PRESENT LAW		PROPOSED LAW
	DISCOVER PROTOTYPE COMPOUND	
	MAKE AND EVALUATE ANALOGS	
	DETAILED EVALUATION—ANIMALS	FILING
	SELECT DEVELOPMENT CANDIDATE	
FILING	BULK SYNTHESIS—QUALITY CONTROL	18 MONTH PUBLICATION
	PRECLINICAL TOXICOLOGY	
	CLINICAL SAFETY, TOLERATION (I)	
	CLINICAL EFFICACY—CONTROLS (II)	
18 MONTH PUBLICATION	BROAD CLINICAL TRIAL (III)	
	NDA FILING	
	CLEARANCE TO MARKET	

After the discovery is made, one has to do some research to determine its scope and its significance: Chemical research, to make related compounds to try to determine the relationship between molecular structure and the activity of interest; also biological research, to define what the useful activities of the drug are, what its therapeutic ratio is, how safe it is likely to be on the basis of what it does in animals, and so on.

The synthesis of this compound has to be determined in order to

make large amounts necessary for toxicological study and clinical trial, and it has to be ultra pure. This is a brand new experimental compound and the time required is substantial.

Then toxology is undertaken in two or more groups of animals, including very sophisticated approaches to this aspect of the problem, and if these hurdles are gotten over, then and only then, questions of safety and toleration of this experimental drug are approached in human volunteers, usually prisoners, in what is called an FDA Clinical Trial.

After that, and only after that, does one move to the control studies in small groups of actual patients that, for the first time, indicate whether the drug has any of the efficacy expected of it from the animal results.

Notice particularly that under the presently proposed legislation, publication of a pending application could actually occur well before the first data on clinical efficacy is actually available to the inventor. When you realize that this early clinical information is often the signal to start the research process all over again—to select and develop a more promising analogue—you begin to appreciate just how untimely this publication could be.

I can think of one current example at Pfizer where we have brought five closely related members of a single family of compounds into clinical trial—strictly in an attempt to achieve the optimum clinical activity profile in a promising new type of drug. How can it possibly serve the public interest to encourage research on this kind of early lead in another laboratory—research that must begin by expending considerable effort just to develop the same knowledge and degree of expertness that the discovery project team already has?

Just how sound is the argument put forth in support of early publication of patent applications? The report of the President's Commission states that a first-to-file system and mandatory publication deadlines will encourage prompt disclosure of newly discovered technology and thereby promote additional advances based on the information disclosed. As regards drug research, this prospect is not realistic. There is no question but that drug research, like all scientific research, is stimulated by the publication of new information. However, real progress is brought about only when full accounts of new findings are reported in the scientific literature—the mode of action of a new drug, its clinical advantages and shortcomings and so on. Patent specifications, however detailed they may be, serve this end almost not at all.

Any suggestion that early publication of pending applications will speed up research progress, as far as the drug field goes, would be, in my opinion, naive and misleading. Quite to the contrary, the insecurity bred by the feeling of time pressure and by the anticipation of ultimately obtaining less adequate patent coverage, will, if anything, tend to delay publication of the really important aspects of new discoveries, thereby hampering rather than promoting medical research progress.

In closing I would like to mention that a recent opportunity I have had to visit the Chemical Division of the U. S. Patent Office has helped me to appreciate rather fully the need for patent reforms that will serve to lighten the incredible burden being borne by Mr. Marcus and his staff of Examiners.

Certainly the goal of establishing a truly international patent system, with high standards, is an eminently worthwhile one. However, I would hope that the legislation ultimately drafted to achieve this end will reflect some of the constructive concern for the inventor being expressed in dialogues like the present. In particular I would urge that the sometimes unusual protection needs of drug research receive thoughtful consideration, especially in view of the progress being made toward national health goals by that research.

It is clear that the ever increasing complexity of the challenges faced by pharmaceutical research means constantly greater risk; and without adequate patent protection, I can sincerely say that the incentive to invest in such high-risk research is going to diminish significantly.

The intellectual property rights of the inventor of a new drug deserve protection that will allow *him* to determine the full scope and significance of his own basic invention, free of inappropriate deadlines, and of the kind of time pressure that cannot serve to facilitate bona fide medical progress—and is therefore not in the public interest.

Thank you. (Applause)

DR. MILTON HARRIS: I am sorry to report that Dr. Davis is very ill and cannot be with us today.

You just heard an interesting discussion of a very complex field which your speaker says involves much interdisciplinary work.

We are now going to make a big transition and go over to another phase of the problem, the innovative and creative process.

It is my privilege to present Richard Walton.

RICHARD R. WALTON

First, I should make clear the background from which I speak. I am an independent inventor. During the past 16 years I have acquired approximately 30 U. S. patents and over 400 foreign patents in the mechanical fields of textile and paper processing, washing machines, materials-handling and other areas. There are two significant things about this perhaps small number of U. S. patents. One is that all are licensed and working; the other is that all of my principal inventions were licensed before patents were applied for them.

You might be interested in how I function as an independent inventor. I attempt, in cooperation with key executives, a method of operation which combines the advantages of the corporate organization with the free but experienced thinking and action of the individual.

A company either comes to me with a problem or I contact them with a broad idea in a specific field of endeavor. If they have strong interests in this field and are doing no active work in it themselves, we arrive at the following simple understanding:

The company furnishes me with nonconfidential background information, patent legal assistance, raw materials and testing. I, in turn, devote my best efforts to solving the problem, keeping them advised of progress, and when and if successful, giving them the opportunity of first refusal.

More often than not, it has been my experience that long before conclusion of the project, the company has become so interested and involved that final contract details are worked out well in advance of final model. Thus, the problem of selling or merchandising the invention is eliminated.

I might add that money is not involved in this transaction until the final contract is consummated. This type of relationship obviously involves a great deal of trust and confidence on both sides, and I find that the company officials are glad to be kept abreast of developments, to witness my disclosures as they evolve, and to make suggestions and guide me in my work.

I attend no conferences, write no reports, and invite them to visit only when significant progress has been made. Never am I forced to waste time with superfluous dress rehearsals. In a way I become an unpaid, though responsible, division of the company with all its advantages and few of its disadvantages.

After years of operating as a consultant and independent inventor, I am convinced that once paid in advance for inventing, your emphasis changes toward pleasing the source of the money and away from exerting that last ounce of effort and suffering during which real creativity occurs.

Let us see how the present patent system helps to foster the type of relationship between inventor and company I have just described. I am certain that the relationship would only be possible in a climate of trust, and I believe that our present disclosure-reduction-to-practice system at least fosters trust where, as you know, a legendary mistrust exists between companies and outside inventors.

Many potential inventors ask my advice about what to do with their inventions. Most of them have used the self-addressed envelope method for the protection of their idea. Their relief is great when they find that a properly witnessed disclosure in lieu of a patent application will allow them more time in which to perfect their invention, time to apply for a patent, and time to find if a market exists. And they should be allowed this time, because it must never be forgotten that these amateurs are the inventors of tomorrow.

Under our present system, according to statistics developed by the Organization for Economic Cooperation and Development, over \$500 million are paid the United States yearly by foreign countries for royalties on inventions. France, Germany, England and Japan each pay us in excess of \$50 million annually for royalties on our technology. I am led to draw an important conclusion for these statistics that our system must be working rather well.

As you know, almost all other countries have a first-to-file system. As I mentioned earlier, I have over 400 foreign patents and in each case I am the first to file. This would seem to indicate that the first-to-file system in the United States should be no problem to American inventors. But there is one vital factor to be considered.

The fact is that U. S. technology, which has been fostered by the present system, is generally ahead of foreign technology.

Invention both precedes and follows technological change, with perhaps the majority of inventions occurring during and after the changes. What does this mean?

Inventions are demanded by technological change. Consequently, the U. S. knowledge of problems and inventions will, in most cases, be far ahead of that in other countries. This time differential between the United States and other countries has been very evident to me in my field, and one very good example is my shrinkproofing process for cotton-knit material.

Shrink-proofing of cotton-knit material did not become a problem in this country as long as washed garments were hung on lines to dry. The advent of the modern tumble drier represented a technological change that altered the picture.

The cotton-knit shrinkage became a nightmare with some shrinkage as much as 40 percent. Hence, the problem posed by the tumble-drying technology prompted the invention of my shrink-proofing process. At present, after a time-lag of almost ten years, foreign countries, gradually modernizing, are acquiring more tumble driers. The shrink-proofing problem has become very real to them and my process is spreading all over the world.

To summarize, our present system has these advantages: It gives us time to perfect our inventions, time to test in production, time to develop good patent applications, and a year in which to decide on foreign filing.

We should not tamper with this system, which has served us so well, unless the changes are clearly superior.

My first reaction to the proposed patent reform act was that I could live with it but that it was going to be difficult for novice inventors and small companies. But as I studied it more thoroughly and discussed it with various people whose opinions I respect, I became alarmed at the great though subtle differences the act proposed. I intend to make a point of only one, the first-to-file clause.

As I understand it, this would mean that we would depart completely from our system where the first inventor is carefully and equitably rewarded and, instead, would reward the one who most quickly runs to the Patent Office with his application.

This becomes rather shocking when one remembers how meticulous our patent system has been in demanding that only the first inventor sign the application. I think the small number of interferences in our country is because of the intense honor of our system. Have we been misguided all these years?

To me it is unthinkable even to consider rewarding anyone but the first inventor. I always thought that the first inventor was the concern of the Constitution. Let me foretell what I think abandoning this principle would do to the inventor, the small company and our country.

I feel that time is a vital partner of creativity, and the inventor should not be denied control of his timing during the period of perfecting his invention. With a first-to-file system, he would constantly be harassed with the pressure of filing quickly to protect his progress. This could lead, first, to an excessive number of filings,

excessive expenditure of money, and premature filing with hastily and improperly prepared patent applications.

As if that would not be bad enough, the premature and hasty disclosures would be held against the inventor when he finally perfected his invention and really knew what was vital and patentable. He would find he could not gain the protection he needed from his final patent.

Now, how would this affect not only the inventor but our country? It would mean that in many cases the final invention would only be partially protected by fuzzy patents, and these, as you know, are difficult to license or sell. This may not be an awesome situation for large companies holding such patents, for they probably would not hesitate to manufacture under them. But such patents are a distinct disadvantage to the small company and the independent inventor.

Another factor to consider is that if a promising field has been opened by a hastily prepared, weak patent, further technological advancement in the particular field may be harmed for years. Patents are not simply collections of words. Only strong patents are capable of becoming building blocks upon which technology can expand and our country gain.

Inventors make enough mistakes in timing and content of patent applications without the added constant and great pressure of having to be the first-to-file. I mentioned my foreign patents earlier.

When my attorneys prepare a U. S. patent application, great care is taken to eliminate as many superfluous drawings, descriptions and claims as possible for the following reasons: Under the U. S. patent law fee system, it behooves us to economize on pages and drawings, but even more important (since I always file in at least seven countries and sometimes in as many as 50), the foreign filing becomes only a matter of translations and slight changes in form demanded by each country.

In my own experience, I have had so few real difficulties in foreign filing that I, for one, am willing to shoulder these relatively slight difficulties in order to retain the advantages provided by our policy of rewarding the patent to the first inventor.

I feel that a first-to-file system would mean almost complete elimination of that most essential information flow which comes from the reactions of experienced people during the process of bringing an invention to enough perfection to write a strong, valid application surrounding it.

There are many false starts in the path of a good invention—discarding, changing direction, starting over again—before the solution

that fits in the marketplace has been achieved, and it should not be demanded that the inventor, for his protection, file patent applications on all his false starts, but that he should be free, with *reasonable security*, to move each of these efforts towards the best solution.

The proposed change to first-to-file brings to mind the analogy of a company with a very successful product which is selling so well that every department in the company is bursting its seams. To solve this rather pleasant dilemma, the company decides to change to a new product line. While this is an exaggeration, it bears some resemblance to the proposed patent reform bill.

Of course, our patent system needs minor changes to bring it in tune with the 20th Century, but its basic principles should be preserved.

As for the Patent Office and its alleged slowness in acting on patent applications: I have nothing but admiration for it and the dedicated Examiners who give it meaning. I fear that much of the problem lies at the inventors' feet. In my case most of the delay in my acquiring a patent has come from my taking advantage of every means of delaying its issuance; and now by new speed-up rules (when requested), they issue almost too quickly for comfort.

Good patents demand time, good inventions, good lawyers and able Examiners, and there are no substitutes. So instead of mistreating the Patent Office by too much economy—which is like cutting down on the food supply of a growing teen-ager—why don't we increase Examiners' salaries to more than compete with industry, bring all modern methods of holding and retrieving information to bear, and give the Patent Office an aura and spirit which will attract and hold talented young men.

As for the expense involved, in terms of Gross National Product, just one strong U. S. patent could more than pay all the expenses of the Patent Office.

In conclusion, I have the deepest respect for our great patent system, which has helped to make this country the greatest on earth. It is like a fine instrument whose only limitation is the ability of the user. (Applause)

DR. MILTON HARRIS: Thank you, Dick.

I have been advised by the Chairman that slips of paper have been passed among you. It is hoped you will submit your questions and comments on them and we will handle them during the discussion period.

Next we pass on now to what will probably have a different tone. We come into the realm of the economist, Dr. Irving Siegel, of the Upjohn Institute for Employment Research.

Dr. Siegel.

IRVING H. SIEGEL

Since people associated with the work of The PTC Research Institute commonly take their turn toward the end of a Conference program, they become used to hearing some of their better ideas stated more authoritatively and more eloquently by the practitioners who precede them. Mr. Walton, representing the inventor, has just made some very decisive inroads into my intended presentation. I am hardly at a loss for words, however, as I shall proceed to prove.

Our topic, "Protection Needs in R&D," involves much more than patents. Research activity also generates know-how, trade secrets, and proprietary technical data. It leads to the preparation of published and confidential reports; and the information contained therein often represents only a "widening," rather than a "deepening," of the state of art—that is, a widened access to an *existing* technical frontier. Furthermore, research activity helps to improve the knowledge, skills, and experience of people; and the benefits of this additional education through research may become available, if at all, to another employer, after some migration, at another time. Different kinds and different embodiments of information—and different apparent or acknowledged rights—give rise to a great variety of protection needs.

Another complication is that research involves transactions across many interfaces—within the firm and with the outside world. Management and technical personnel have to establish and maintain a productive rapport, and technical people have to work cooperatively with each other and with project leaders. Lines of communication with the larger scientific community have to be kept open; and adequate techniques must be available for identifying, locating, and retrieving pertinent earlier contributions stored in library books, journals, and patents. (How often does a company nowadays spend a buck in the laboratory that might better have been spent in a literature search?) A company engaging in research, moreover, must deal effectively with

universities, other firms, the government, domestic customers and with foreign competitors and government officials too. Manifold and varied protection needs in research obviously are generated also by the multiplicity of transactions and interests involved.

Many of my economic colleagues tend to exaggerate, as journalists also usually do, the role of R&D in economic growth and development. Less glamorous factors that underlie, and contribute to the realization of, research decisions—the prospect of profit and the supply of venture capital, for instance—should not be denigrated. Although many companies boast of the contribution of new products to their revenues, the growth of the whole economy always depends primarily on expanding markets for more or less *established* goods and services.

Academic and government zealots for “technological transfer” rate an electronic-equipment venture above the enterprise of a hamburger king, but society has its own test. This test is not novelty, but utility and serviceability; and the latter are reflected in profitability. In our economic system, he prayeth best who employeth best, today and in the longer run, in income-yielding, legally tolerable work, whether great or small. A hamburger king could not, even if he wanted to, belatedly acquire a technological face; moreover, he does not need to try. With the help of little or no R&D, but probably with support from low-order trade secrets (such as “special” recipes) in addition to know-how, he adequately performs a social and economic function.

Now, with these remarks for perspective, I want to say something about the firms that do emphasize R&D and acquire presumably valuable patent rights. Such firms, by the way, are only a small minority of the manufacturing universe, although they make up in size and economic importance for their lack of numbers. Early PTC Research Institute studies supervised by me showed that small firms rarely begin life around a strong patent core; that these firms rely heavily on the know-how they acquire; that they have to achieve a certain size and security before they seek to consolidate their market position with internally generated and purchased patents. •

I am impressed, as I look through the annual crop of reports to stockholders and as I glance at company advertisements in popular magazines and trade journals, with the remarkable reticence exhibited on the place of patents in the scheme of things. Do not companies with obvious “protection needs in R&D” have a special interest in patents? Should they not use the media available to them for courting public and stockholder opinion? Ought they not to feel particularly motivated to do so at a time when a Presidential Commission is studying patent

reform? Why are they not disposed to proclaim their faith in the system of limited legal monopoly that economically means much to them, that is regarded with suspicion in "intellectual" circles where it is under constant guerrilla attack?

In a later issue of *IDEA*, I shall add to my series of short papers on patent references in corporate annual reports. This time, I shall say something too about advertising (Uniroyal and Fairchild Semiconductor, for example, deserve good marks). My main purpose is to point to the paradox that companies that have a "patent story" to tell fail to do so, as a rule, even in annual reports and advertisements that feature their technological prowess.

What reasons can be advanced for neglect? One may be that the large firm has a hard enough time living with antitrust and does not want to call attention to sensitive issues (even though it regards its conduct as legally very correct). The sleeping dog should not be aroused and the boat should not be rocked, according to the top management that already is otherwise fully engaged.

Another possible reason is that the management "revolution"—only one of the innumerable "revolutions" and "explosions" being advertised for our society—features the mobile expert who comes to a firm for a limited term and for a special task and then moves on. This new breed of hired specialized managers may stay for two to five years. One of these experts may focus on, say, the reduction of swollen inventories, the revision of production methods, or the computerization of accounts. While he concentrates on this master challenge, to fool around conspicuously with a low-grade problem of patents would be like pausing in a battlefield to pick daisies.

Talking of "explosions," I recall that the report of the President's Commission proclaims its relevancy in the cover title to "an age of exploding technology." I have great difficulty in seeing the point finding it easier to believe, instead, that I detect in the title the heavy hand of the ubiquitous public-relations officer. I think that the "protection needs in R&D" of our present age could be handled as the needs of yesteryear could also have been handled—by the adequate staffing of the Patent Office with adequately paid Examiners. Mr. Walton referred to this desirable improvement, which has been proposed often, but without significant implementation.

Government becomes increasingly sophisticated in its budgetry. The new rage is cost-effectiveness. A clever analysis of the new kind ought readily show that the existing patent system should really be tried before major innovations are made along uncertain paths. Could not

the nation's technological posture be visibly improved if a minuscule amount were taken, say, from the space budget and added to the Patent Office expenditure of only \$40 million? And this may seem a heresy, but anyone with government experience ought also to agree that a defense budget of something like \$75 billion could itself be pruned trivially without harm to our military effectiveness while benefiting the Patent Office substantially. A noticeably big bang, I think, could be obtained from a marginal buck added to this organization's resources. New experiments in promoting technological transfer may also prove much less productive than the application of the same funds to the budget of the Patent Office—which, after all, has been engaged in technological transfer for more than a century.

Were our nation not already heavily committed in other directions requiring vast funds, we might now find ourselves suddenly in the midst of an unfortunate "revolution" of technological transfer. Innovation has been exaggerated, I have stated, as a source of needed United States growth. I frankly fail to see why novelty is now more important than, say, solving old familiar problems. These old problems, moreover, include burdens sneaked in to our lives by earlier technological successes. And new successes too will seem like good bargains as we continue to make cost-effectiveness calculations that fail to incorporate in cost the conjectural (but eventually all-too-real) dysfunctional accompaniments of technological change.

For a moment, I digress to say that it remains useful to distinguish, as economists often do, between innovation and imitation or diffusion. A successfully diffused innovation has much more economic impact than a mere innovation.

The automobile, an invention cluster that is hardly new, is still going strong. Its diffusion in terms of numbers and ownership has much to do with the national level of business activity and employment. This diffusion has much to do too with the geographic distribution of population—and also with the clogging and carving up of cities, with the problems of ghettos and civil rights. Growth clearly involves more than innovation. It is also evident that much unfinished business remains for economic enterprise—especially *public* enterprise—as a residue of old technological "improvements."

The patent system has served as a powerful instrument of diffusion of products and processes, doing so in a rather orderly manner and with due regard for the competing rights of inventors, assignees, licensors, and licensees in the United States and abroad. It is an established agent of "technological transfer." It was functioning before

this new term was invented. Presumably, it will continue to do the job after the public concern generated around this term has evaporated and after a new fashion and a new term take the center of the stage.

I read every new report I can find on technological transfer, and I am amused to see that the old villains, such as "vested interests," are excoriated anew. One report in front of me cries out that many government agencies themselves are anti-innovative, agencies dominated by legal minds rather than minds supposedly better attuned to economic and technological opportunities. Alas, we suffer from a government of lawyers, not men!

What I read nowadays has a haunting kinship to the literature of earlier years. Three decades ago, during the great depression, it was my privilege and misfortune to be on a WPA project. My colleagues and I, however, had good morale, regarding ourselves as the cream of the social slag. At peak, this WPA National Research Project on Re-employment Opportunities and Recent Changes in Industrial Techniques had about half of the country's economists, sociologists, and engineers on its staff—all trying to find out why the other half were still unemployed. Among other pioneering contributions, this agency sponsored an early study of the growth of corporate R&D. Assigned the task of prepublication critic, I took exception to the main conclusion—that the government should sponsor the research competitiveness of small firms with larger ones. The flaw, I observed, was that information acquired at government expense by small firms could hardly be withheld from large ones. The dilemma remains. My written critique made reference to Anatole France's insight: That the law, in its majesty, permits both the rich man and the poor man to sleep on a bench along the Seine. You may change the name of the river.

The great pay-offs today do not have to be sought in exotic technology; and we need not push, for growth's sake, the "transfer" of a promising gadget. Raising the quality of life is the great new frontier, right in front of our noses. It is an old frontier, an eternal frontier, but today it is compellingly new. Perhaps, the technology required is dull, well known; perhaps, only developmental research of a minor or humdrum sort is required. But there is enough work to do to clean up the slums, build new schools, teach the neglected, train the needed doctors and other health personnel, reduce the pollution of air and water, unsnarl city traffic, et cetera. I am not at all opposed to further impressive technological evolution, having been concerned with this subject throughout my professional career. I am bored, skeptical, however, of the exaggerated claims that this evolution is the master key to our continuing economic growth; besides, I believe that

our economic system will routinely continue to encourage profitable new civilian technology, while the government sponsorship of defense research brings sophisticated additional technology of currently dubious economic merit closer to the civilian economic margin.

Before I close, I want to comment on two more matters. First, I want to stress the importance of attention to personnel in any serious inquiry into "protection needs in R&D." I invite your perusal of my paper on "Employee Creativity and Organizational Aims" in *IDEA*, Fall 1965. There is a difference between creativity and productiveness, and neurotic and social factors may especially block the latter. Dr. Lawrence Kubie has written about neurotic distortion of the creative personality. The social block may result, for example, from poor project leadership or from defects in the company reward system (especially monetary).

My concluding point is that the practical side of information theory has to be developed far beyond the present state. We have to treat "information" (which, in a less inclusive sense, should be distinguished from knowledge and from wisdom to make new decisions) as a worthy area of inquiry that is no less important than material technology or energy technology. As I noted at the beginning, there are many kinds, forms, and hierarchical levels of information; and different rights of those who share in its generation, distribution, transformation, storage, and retrieval. The social benefits and harms of redundancy, repetition, and variation should also be explored. Why do those professors who regard patents as blockades that oblige wasteful "inventing around" see no economic folly in grants for research projects yielding relatively little or only trivial new information? Why do they bother copyrighting text books that largely repeat with minor variation what other textbooks already say? Should they care that the national product might be enlarged by a shift of effort from research-like and publication activities at our universities to old-fashioned classroom instruction? Well, you see the possibilities.

Thank you. (Applause)

DR. MILTON HARRIS: Thank you, Dr. Siegel. I think we are all happy that you were not intimidated and we agree with you in your message. We have one more member of the panel, another old friend, John Green, a man with engineering and legal backgrounds and former Director of Analysis and Research at the Office of Emergency Planning in the Office of the President.

JOHN C. GREEN

Before tackling my topic, I would like to make a footnote to one of Irving's comments. Since Dr. Hafstad is in the audience, Irving was careful to say the automobile was not to be blamed for some of our social attitudes, but I recall Dr. Hafstad's predecessor, Dr. Kettering, who used to say the automobile removed courtship from the parlor to the back seat where it became more ardent. Therefore, the automobile has had a definite impact on population, social mores and the like.

As most of you have read the Commission's Report, I think you are all aware that the Commission believes in the worthwhileness of the patent system. After first assuring themselves in this regard, they then selected six areas with which they felt they could deal most effectively. There is a seventh which is broader than those listed but includes all of them. This is "The patent system should contribute positively to the successful introduction of new ideas into commerce and to the growth of the economy."

Dr. Harris asked me to keep that concept in mind when preparing these remarks. Also he asked me to look at those issues which would be of most concern to an administrator of research. Thus I should quickly define the term "research administrator." He is one who has been assigned responsibility for the research and development function in his company. This includes—allocation of the research budget, development of the research program, administration of the research personnel, responsibility for their satisfactory performance, and completion of the research projects in a reasonable time. Often he is not an inventor, although inventors work for him. He is scientifically trained and has a good working knowledge of the "interface" between patent law and science. He is responsible for creating and maintaining an environment favorable to innovation within the company and for producing a reasonable number of discoveries which will contribute to the growth and success of that company. (Dr. Stark Draper is one who certainly qualifies—as does Dr. Hafstad who will receive the Award tonight.)

Many of the proposed changes will be of little concern to the research administrator. However there are a few, which if enacted into law, would have to be weighed carefully to protect the interests of his staff and his company. These might be loosely titled "Personnel Administration" and "Filing of Applications."

Over the years scientists employed by industry have been studied

extensively. In general their attitudes, behavior and operations are reasonably well understood. Like all of us the industrial researcher expects to be paid well for his services. He expects also an environment conducive to innovation. To him this means freedom to travel to, and participate in, scientific and technical meetings, to write articles for the scientific and technical journals, to receive visits from his peers, and to exchange information with them. All of these incentives, as the Commission points out, are supported by the protection conveyed by a patent system.

An important question to consider then is—Will that environment be improved or impaired if the recommendations are enacted into law? Based on fragmentary information available today one might speculate as follows: Attendance at scientific meetings would not be limited. However the scientist might be advised to play the role of observer or reporter rather than that of active participant. Visits from colleagues outside the company would be limited and those approved would be under restrictions that guarded the information disclosed. Similarly writing for publication in scientific and technical journals might continue, yet the article might be held back until the significant knowledge had been filed in the patent office.

In discussing the specific characteristics of scientists in industry one might note that often they have less company loyalty than other employees. They often change jobs, finding themselves professional employment with a competitive company. These are conditions favorable to leaking of information between firms. Thus research administrators might find themselves tending to introduce a "need to know" policy in talking about novel technical developments even within the company.

Would the ability to file "preliminary applications" reduce the new concerns of the research administrator? Of course no one can say—however I don't think we can disagree with Mr. Pugsley's statement that "Any patent based upon a carefully prepared disclosure of a complete invention is more valuable to the scientific community than one based on a hastily written disclosure of an incomplete invention."

Today the scientific and engineering groups pay inadequate attention to patents as a form of technical information. Whether this situation would worsen or improve under the recommended changes is another area for speculation.

Now let me move to the filing problems. How will the research administrator decide when and how often to apply for a patent? This will vary from industry to industry. However it seems fair to believe that most firms will file earlier than heretofore. In fact that is the hope

expressed by the Commission. Some research administrators doubt that earlier filing will be of benefit except for trivial inventions. Normally there is a period of time between the creative concept and the identification of the most practical embodiment of the process. In that time span the inventor and those associated with him perform a series of tests and experiments. In the same period they are considering commercial problems such as in what form can the item be manufactured most conveniently. Also how will it be distributed, how will it be serviced, what price must it sell for and the like. If the research administrator must decide whether to file or not before this knowledge has been developed one can guess that he'll recommend filing more applications than is current practice as a hedge against failing to protect the one which turns out to be most useful from an economic view. This would seem particularly true in the pharmaceutical, agricultural, and chemical industries where antibiotics, medicines, fertilizers, plant stimulants, and the like must undergo generations of testing before the manufacturer can apply to the government control agencies for permission to produce and sell the product.

I should note in passing that while "interferences" would no longer exist the custom of making laboratory notebooks to report progress would not be changed. This is the accepted method for measuring progress in the completion of a scientific assignment and would be retained by the research administrator to keep abreast of the activities of his staff.

I should emphasize that speculating about these problem areas is not challenging the recommendations nor questioning the good intentions of the Commission experts. Instead I am endeavoring to bring before this forum the new problems and considerations a research administrator would face if the changes proposed should be enacted into law.

With that noted I would like to insert a personal comment and opinion with respect to one recommendation. That is number 29 which refers to research on totally mechanized search.

I do not pretend to be an expert, but I have some background. For example I was a member of Dr. Vannevar Bush's committee which, early in the Eisenhower administration, urged the Secretary of Commerce to set up such a research program. Later, at the request of Commissioner Ladd, the Director of the National Bureau of Standards and I analyzed the ongoing program and prepared a blueprint intended to move it ahead. Also I was a member of a small group sent to Europe, including Soviet Russia, to try to uncover new ideas in mechanized search. And until recently I was responsible for a large

government analytical facility using computers. Also in the late 1940's I allocated government funds to design and build a high-speed storage and retrieval machine, one of whose major objectives was to undertake patent searches.

Despite this long and continued interest I doubt that total mechanized search is on, or just beyond the horizon. Research, to keep abreast of the range of developments, is laudable. However, in my opinion, substantial contributions to the Patent Office will be postponed for another decade. (Applause)

Panel Discussion and Question Period

DR. MILTON HARRIS: Thank you, John. I would like to ask my namesake chairman how long this question period will go on and then I will know how to handle the strategy.

In submitting the questions to the various speakers—some of them pose very formidable questions—and I am going to have to ask the speakers not to give their second speeches of the morning. Otherwise, we won't get through many of them. One for Dr. Bloom.

"Is there any period of time which would be acceptable to the drug industry for the publication of inventions on which patents are being sought?"

DR. BLOOM: If I fully understand the implication of the question, it seems to me I alluded to a suggested time scale that the American Chemical Society has proposed which certainly strikes me as a step in the right direction.

In my talk, I mentioned a real-life example that I think shows that a period of a few years is bound to be too short in certain instances, but obviously we have to make compromises with the realities of the situation.

I would certainly prefer the publication dates that the American Chemical Society favors to those suggested in the Patent Reform Act of 1967.

DR. MILTON HARRIS: "In your second slide what was the 18-month publication to which you refer under present law;" and second, "in the drug industry I had been told it is common practice to induce interferences in the Patent Office after a competitor publishes or

announces a new drug. This is accomplished by reviewing past research in the similar area and filing new applications, hoping for interference, thus issuance of the competitor's patent is delayed. Is this true?"

DR. BLOOM: Taking the first question first, I am sorry that I did not have time to more adequately cover the material on the slide. I was merely referring to the fact that under the present system, if you are interested in international coverage—and most American pharmaceutical firms like ours have major international operations—you would be filing in convention countries. In certain of these, publication inevitably occurs as early as six months after filing. This means that publication would take place within 18 months after the first filing in the United States.

With regard to the second question, it strikes me as a rather complicated one to relate to today's subject in a few words. It is quite true that on occasion a drug research scientist has the unpleasant experience of learning that others have conducted—and published—research identical with that currently underway in his own laboratory. In such cases, especially where important developments are concerned, it seems only reasonable that he take those steps allowed under existing patent law to protect his intellectual property rights. Such instances are relatively rare in my experience, however. Under the proposed first-to-file system there would be no redress in such instances, of course. Whether that would be a good thing is another question.

DR. MILTON HARRIS: I have here a comment I would like to read.

"Mr. Walton is so right, not only as to the small inventor but also as to the inventors in large research laboratories where much time is now needed to bring new ideas into workable concepts. Let's keep the one-year provision by all means."

This is to Mr. Walton.

"Isn't the rush to the Patent Office with some information as a result of a first-to-file system more fancy than fact? Having 400 foreign patents which except for Canada and the Philippines are based on first-to-file systems, did you feel compelled to rush into the United States Patent Office in order to obtain an early convention date?"

"Are you not, therefore, in fact operating on a first-to-file system at least to protect your foreign patent rights?"

MR. WALTON: I thought I made that clear in describing the great time lag that exists, at least in my field, in foreign countries. I have had no trouble being first in foreign filings; it appears this is simply because their technology is that far behind us. I had ample time, under the U. S. patent system, to prepare good patents.

DR. MILTON HARRIS: To Professor Draper. "What was the underlying cause or need, as you understand it at the time, which motivated the recommendation of the formation of a Presidential Commission? What is your expressed disappointment with the report of the Presidential Commission?"

DR. DRAPER: I believe that a very strong motivation behind the suggestions of the Commission was in the field of international patents and the concept, one of the main thoughts, was that perhaps we could bring our system more nearly into a match with foreign systems, thereby—at least this was the hope—greatly improving the situation for people who were interested in filing foreign patents.

I think this was one of the principal ideas. My remark here parenthetically is that I have been privileged in my life to know quite a number of gentlemen who are genuinely fine creative people of whom Dick Walton is one of these. I know quite a few others of this sort and my feeling is that under any system whatsoever, they will still have an excellent chance of coming out on top against any competition. I feel that Dick Walton will be a leader no matter what laws and rules may be.

My disappointment with the proposed legislation is this. My hope in the beginning was that the Commission would approach the problem that was originally given to my panel as a guideline and examine the whole matter of creativity, invention and innovation with the objective of directing efforts toward improving the environment for stimulating creativity—if you want to lump it in one term—toward greater services to our society. I am disappointed that the proposals ended up without any real consideration of any kind for creativity itself. No thought appeared to be concerned with improving the benefits that society derives from creativity, but attention was directed toward the legalistic matters of legislation, rules, regulations and controls for operation of a system. In looking at the overall result I am not impressed that indeed we did end up with something that would help with the encouragement for creativity that started the whole exercise of reviewing the patent systems.

Does that answer the question?

DR. MILTON HARRIS: Here is a question to Dr. Siegel.

"Dr. Siegel raises the issue of duplication in producing textbooks. What about the redundancy and duplication in the multiprocessing of patents? As we move toward international patent standards, can there be perhaps a movement towards organizational unification also?"

DR. SIEGEL: Almost all human endeavors show, as we progress from simpler to complex systems, that we strive to coordinate more effec-

tively the components, to overcome what is merely suboptimization in favor of what is called larger systems optimization.

There is no doubt that multinational systems will become better coordinated through international conventions over the years. Presumably one of the legislative proposals brought to the fore by the Administration this year is an important step, whether it was enacted or not. People have to talk about these things for a number of years before workable ways of achieving these sought objectives are developed.

Those of you who heard General Sarnoff accept the Kettering Award last year recall his proposal for an international patent system.

There are movements all over the world to form common markets, as in Europe and Latin America. No doubt, in the patent field as in these other endeavors, efforts will multiply to coordinate the parallel work in different countries toward common goals.

DR. MILTON HARRIS: There are some questions here that I am not sure have been answered. This one is addressed to Dr. Bloom.

"You mentioned visits to Patent Office and Mr. Marcus. What did you find were the problems of the chemical examining group which legislation might help? What change do they need?"

DR. BLOOM: It sounds to me as if someone is trying to get an inexpensive answer to a very expensive question.

Well, I should not take up time trying to answer this question, because I really do not have anything profound to offer. It seems to me though that methods of information retrieval and systems analysis that are now commonplace throughout industry could be much more extensively applied to the operations of the Chemical Division than was evident to me from my brief visit.

I would guess that this has not yet been done, in part because of the limitations of funds and personnel that have affected the entire Patent Office. It seems to me that recommendations have been made this morning by several speakers suggesting that what is a relatively small amount of money by Washington standards could go a long way toward increasing the efficiency of those operations.

DR. MILTON HARRIS: This question is addressed to Dr. Bloom and Mr. Walton.

"How long a period do you feel is safe, under the present interference practice, in postponing filing a patent application after its idea content is clear to you?"

DR. BLOOM: In the case of drug research, I think that period is defined quite clearly by certain factors inherent in the research process. We do not really wait very long before we file under the

present system, because from the time we go into Phase II clinical trial, we are dealing with scientists in the medical community-at-large who have no contractual relationship with our organization. As information goes, our new drug is essentially in the public domain. So we certainly file before that fairly early stage is reached. But nowhere near as early as we would be required to file under a first-to-file system.

DR. MILTON HARRIS: There is a related question here while I have you both.

"Since the pharmaceutical industry is in the forefront of international trade, isn't it true these companies must of necessity operate in the context of, one, first-to-file; second, earlier publication of patent or patent application, whether or not the United States decides to follow on these consents?"

DR. BLOOM: In a sense, yes. But there is an important distinction that would probably have been made clearer if I had been able to devote a little more time to the slide.

Under the present system, as was indicated on the slide that you saw, the initial filing can occur at a point in time that will allow us a fighting chance of learning what the drug we are developing really is all about, by the time the public disclosure takes place. Under a first-to-file system in the United States—which after all is the country where patent rights are usually of the greatest value in an international trade sense—we would have to start the whole proceedings much earlier.

So, yes, sir, the question is well taken qualitatively, but there is an important quantitative distinction between the existing system, and what it would be like under an American first-to-file.

DR. MILTON HARRIS: This is addressed to Mr. Walton and I suspect the answer is obvious in view of the frequent assertions often unsupported by factual information.

"Do you agree with the Presidential Commission's Report statement that 'the lone independent inventor, even in this day of sophisticated technology, still contributes importantly to the useful arts'?"

MR. WALTON: Yes. I feel this is true. In fact, I did not really become concerned about the Patent Reform Bill until I came to the clause which gave *shop rights* to the true inventor (if he proved his case). How ridiculous to give shop rights to a nonmanufacturing inventor. It was this clause and many others which made it so clear that the independent inventor was not even being considered.

DR. MILTON HARRIS: That concludes all the written questions I have.

I want to take this opportunity to thank the panel and especially the audience for contributing so much. I might add, in winding this up, that although we live in a period of change and constant change, it is a period loaded unfortunately with words such as "revolution" and "explosion" and "innovation" and "creativity" and "spinoff." We do not want status quo, but we do not want change for change's sake.

We do hope to achieve deep-seated changes, but do not like to see half-baked solutions. Sometimes the cure is worse than the disease, so this takes a great amount of judgment and balance on all of our parts.

I would not like to see solutions such as the chap who wrote to the Director of Internal Revenue Service and said, "Dear Mr. Director: I have not been able to sleep for months. My conscience is bothering me. I cheated on last year's income tax and I am very sorry.

"Enclosed herewith is a check for \$100.

"Sincerely yours, Tim Jones."

Then he said: "P.S. If I still can't sleep tonight, I will send you the rest."

Thank you.

DIRECTOR L. JAMES HARRIS: Thank you, Dr. Harris and panel.

That was an excellent discussion. We have heard the problems and issues in this session from people on the frontier of R&D and we are now ready for a discussion by the experts in the following panels of ways and means to solve these problems.

SECOND SESSION

Prospects in Industrial and Intellectual Property Law

Part I—Will Proposed Legislation Deriving from the Report of the President's Commission Meet the Challenge?

DIRECTOR L. JAMES HARRIS: Mr. George Frost is Director of the Patent Section of General Motors Corporation. Mr. Frost is a former member of our Research Staff and we can well understand General Motors confidence in him. Mr. Frost is also an alumnus of The George Washington University Law School. The Institute is pleased to note the continuing contribution to scholarship that Mr. Frost has been making despite a busy work schedule.

MODERATOR GEORGE E. FROST: Thank you very much.

Ladies and gentlemen, we have a program that is going to give us quite a rich fare for the next few hours, so rich that it is going to keep us all busy thinking of some of the problems we face in connection with patent legislation.

Our fare will also be rich because we have a group of speakers who are drawn from several different areas of our professional life. Some are from the patent law practice, some are from the government. Some

of our government people are concerned with the defense of the patent litigation for the government and others are concerned with the planning aspects of patent matters for the government. Still others of our speakers are primarily concerned with the international aspects of the patent law and they will have a message for us that takes us into the law of other countries.

And it is a particularly timely item for our consideration at this time, when we are faced with proposed legislation that has, as part of its stated justification at least, bringing our law into greater conformity with that of other countries.

We all look forward to what they have to say to us. But I think there is something more we should think about this morning. We know last February the President sent to the Congress the so-called Patent Reform Act of 1967. I do not know where that word "reform" came from.

I come from the country and when boys are especially bad, they get sent to the reform school. Now, I do not know whether it is the patent lawyers that are supposed to be going to the reform school in this case or if it is the law that is being reformed or just what. I suspect it was an inept choice of words, but I doubt that too many of us are anxious to be reformed. But I think we can gain by thinking things through, and I hope we can do that this morning.

In any event, back in February two basic bills were introduced. One in the Senate, one in the House, conforming to the President's proposed legislation. And, this was in response to the message of the President to the Congress, a rather short message as such, which outlined some of the reasons why this proposed legislation was sought as a matter of administrative desire.

The President stated this: "I recommend the act. Its purposes are three-fold: First, to raise the quality and reliability of U. S. patents; two, to reduce the time and expense of obtaining and protecting a patent; three, to speed public disclosure of scientific and technological information."

Now we are all aware of the general nature of the proposed Act. The major change, of course, is instituting first-to-file for first-to-invent. Ancillary or secondary changes include elimination of the grace period, new definitions of priority and a list of other changes that have been subject to a great deal of debate in the professional and public press, and in lengthy testimony before the Congress.

I am sure that no one will deny that this is subject matter that by any standard is highly controversial. I was rather surprised the other day to receive in the mail a statement that there is something like 186

amendments so far to the Senate bill, an incredibly large number, if that is an accurate count.

It never pays to sweep differences under the rug. But sometimes controversy, no matter how strong and how great, can be illusory.

It is rarely wise to magnify differences to the point that common ground is overlooked and areas of agreement are clouded.

Let us turn to one illustration. Much has been said about the U. S. principle of first inventorship. The act is supposed to achieve a sharp departure from the U. S. principle by going to first-to-file, but a moment's reflection will show the United States does not have a first-to-invent system in any strict sense and some of the amendments proposed by supporters of the bill in fact depart in the direction of the first-to-file principle.

The fact of the matter is the United States patent system in all recent times has been a system based on the presumption that the first inventor is the first-to-file.

The presumption becomes nearly absolute in some cases and with respect to an inventor working in foreign countries, it is absolute. And as to such inventors, we have in fact a first-to-file system.

In any event, the difference between first-to-file and first-to-invent becomes less and less great as some aspects of the subject are considered.

All of this leads to two points which I hope that our speakers will address themselves to.

The first point or question is this: Do the recommendations of the Commission, and the proposed Act, depart from the present United States practice and law to an extent that precludes compromise on some middle grounds?

As a second, and I would suggest equally important point, I hope that the speakers will address themselves to the following: Would the changes of the proposed Act, if enacted, really change the United States law and practice as greatly as has been indicated, and particularly would they achieve the objectives stressed in support of the bill?

Now on both items we might broaden it to include the Report of the Commission and the points made and the objectives made in the Report itself. These are not intended to be loaded questions. They are not intended to suggest any particular answers. They are supposed to focus our attention this morning and early afternoon on two specific aspects of the recommendations of the Commission, and the proposed legislation.

Again, our speakers are free to treat or not treat these questions and are free to treat them as they wish. I do not know what the views of

the speakers are. But perhaps before we finish, we can generate some debate that will contribute in a measure to an optimum resolution to what is now a most divisive matter.

Now our first speaker is well known to everyone in this group. He is Joseph Gray Jackson, who is a partner in Jackson, Jackson & Chovanes of Philadelphia, Pennsylvania. Joe is a former chairman of the Patent Trademark and Copyright Section of the American Bar Association. It might interest you also to know that Joe is a professional metallurgical engineer. He still retains a deep interest in all phases of science and particularly metallurgy. He is a former president and secretary of the Philadelphia Patent Law Association. He has participated in I don't know how many different professional gatherings of one kind or another.

So without saying more, I introduce to you Joe Jackson.

JOSEPH GRAY JACKSON

Patent Reform Bills S. 1042 and H.R. 5924 flow from suggestions made by the President's Commission on the Patent System. The following radical changes are at the heart of this proposed legislation:

(1) The grace period, by which it is possible to file a United States patent application after the subject matter of the invention has been in public use or on sale within the United States, or has been published anywhere, will be repealed so that a patent application will have to be filed before public use, sale or publication.

(2) Priority will be entirely on the basis of first-to-file, rather than first-to-invent, so that a race to the Patent Office will be instituted.

(3) Interferences by which priority contests are now determined will be discontinued.

These proposals are not calculated to achieve the objectives of the President's Commission, but actually oppose these objectives as follows:

(1) Instead of raising the quality of a patent application, they will lower the quality because of the urge to file immediately rather than prepare a careful patent application.

(2) The pendency of a patent application will be lengthened by

the requirement in the bill that one year be available after filing a preliminary application within which to file more preliminary applications and then a complete application.

(3) While the President's Commission wants to encourage immediate disclosure, this will delay disclosure because:

(a) It will delay sale, since sale cannot be accomplished before filing. At the present time, judging by a sampling obtained by Barkev S. Sanders, of The George Washington University Patent, Trademark and Copyright Research Institute, about 40 percent of the inventions are put on sale before filing in the United States, often for the purpose of market testing.

(b) This will delay publication and will undoubtedly embarrass the scientific community, since many scientists prefer to publish papers in scientific journals before filing in the United States.

(c) This will also delay public use. Now many inventors prefer to put their inventions in public use before filing, in order to discover and correct difficulties in operation before filing.

(4) The proposed law will increase the expense. The filing of preliminary applications alone will be expensive, since, as pointed out by Howard K. Nason of the President's Commission, it will be necessary to prepare preliminary applications with all the attention to formalities necessary in a complete application (except for the claims), as the preliminary application must be relied on to antedate publications, public uses and sales. They will be a booby trap for uninformed inventors who file preliminary applications which they have themselves prepared, in this respect resembling caveats which were abolished in 1910.

(5) One of the major purposes of the President's Commission was to make United States law compatible with foreign law. This fails in that respect also. The laws of major foreign countries differ widely between countries which examine patent applications and countries which merely register them. The proposed law bears some relation to the law in countries like France, Italy and Western Germany, but it fails to include protections which are present even in these laws, such as the right of prior user and the personal grace period in force in West Germany.

(6) Another objective of the President's Commission is to keep up with exploding technology. The proposed law hinders this objective because one must take time to compare a complete application with possibly three or four preliminary applications to know what its effective date is.

Thus the proposed law will impose on the inventor an intolerable

burden of activity. Within one year after he files his first preliminary application, he will have to do each of the following things:

- (1) File preliminaries on all further developments and improvements since he cannot rely on priority except from preliminary applications.
- (2) Complete tests necessary for the complete application.
- (3) Make market tests required to determine whether it is worthwhile to file the complete application.
- (4) Conduct exhibits (except for special international exhibits which give him an exception from the first-to-file rule).
- (5) Aid his attorney in drafting, and finance the filing of a complete application.
- (6) Get special licenses for foreign filing, since licenses will no longer issue automatically as at present.
- (7) File all foreign convention cases.

All of these things must be done in this one-year period, even though the American Chemical Society says that you cannot complete a sophisticated chemical application within one year.

Radical changes in plant operation will result from these provisions of the proposed law. Notwithstanding that many companies now believe that it is good public relations to permit visitors to go through their plants, every plant will have to operate like an armed camp, with exclusion of visitors.

One of the national disgraces, commercial espionage, will become more widespread, and spoiling publications by competitors to bar the inventor from patenting will become general. Even an honest person making an improvement, who files first on his improvement, will prevent patenting the basic invention.

Is it any wonder, therefore, that the overwhelming majority of the relevant informed public is against these provisions?

Another feature of the proposed law which will disastrously increase the cost of obtaining and litigating patents is world-wide prior art in respect to commercial use. Contrary to what one would think from casual inspection of the Commission's Report, worldwide commercial use is only in vogue in a minority of countries as follows:

Worldwide

France	Portugal
Italy	Spain
Mexico (after one year)	Sweden

On the other hand the following countries apply national boundaries in respect to commercial use:

National

Australia	Finland	New Zealand
Austria	Western Germany	Republic of South Africa
Belgium	Great Britain	United States
Canada	Ireland	Norway
Denmark	Japan	Switzerland

Three important areas with which the Commission did not deal, but which urgently require attention, are:

- (1) Claims
- (2) Disclosure
- (3) Petty patents

There is one aspect of the proposed legislation which is widely applauded. This permits filing by the assignee. This will lower the cost because it will not be necessary to file separate applications for employees' inventions because of difference in inventorship, and it will avoid great resentment in determining who are the inventors. Many needless questions of double patenting will be avoided.

Another provision which I strongly favor is early publication of patent applications. This permits the filing of oppositions and goes hand-in-hand with a cancellation procedure. To the extent that these procedures are used, they will raise the quality of patents. Regrettably, however, these features, plus preliminary applications will greatly increase the cost. While in Dallas recently, I talked to two corporate patent executives about cost estimates for operation under the proposed law. One told me that cost would be 150 percent of the present level, and another thought they would be 200 percent. Several corporate patent executives have since agreed with these views. There is one area in the proposed law which I personally favor, though I am in an overwhelming minority of less than 5 percent. I would like to see a limited experiment on deferred examination. And I mean limited! One chemical, one electrical and one mechanical class should be selected and the experiment should be conducted only on the subject matter in these classes for a period of at least 25 years, so that we can draw conclusions after the first group of patents has expired. This would permit an Examiner to concentrate on urgent cases.

The Commission has made a whole series of unwise proposals dealing with minor irritants in the Patent Office. One is that a terminal disclaimer should no longer help in cutting the Gordian knot on double patenting. Another is that no longer can mistakes be corrected by broadened reissue. In this respect the Commission has ignored the saving effect of intervening rights. A third unwise proposal

is that a cut-off date be provided for continuation-in-part applications. This assures, as the American Chemical Society points out, that the patent will include less advanced technology.

The nadir of this group of proposals (the one that rings the bell) is the suggestion of appealing from the five-judge Court of Customs and Patent Appeals to the three-judge Court of Appeals for the District of Columbia. I have a suggestion in this respect. Both courts can sit together and hear one appellate argument, the Court of Customs and Patent Appeals can then render its decision, and the Court of Appeals for the District of Columbia can then reverse it. In a single word, this is superjudgagation. You say that my proposal is nonsense, and I agree, but I point out that the proposal of the Commission is equally arrant nonsense. This would add to the already heavy expense of obtaining a patent.

Another proposal by the Commission that seems to follow their pattern of favoring the large corporation and hurting the small inventor is that computer programs should not be patentable. A computer program of course is something which can be produced by a lone inventor. The provision in the proposed law, Section 106, is so broad as to render unpatentable all cams, gearing, jacquards and other control mechanism. This proposal by the President's Commission is coupled with the irresponsible suggestion to repeal the patent law on designs and plants.

Thus in summary the proposed legislation will have a disastrous impact on the United States patent system by concentrating patents in large corporations, and impeding the individual inventor who makes most of the startling new contributions. If enacted, it will set the patent system back many years. I say this without hesitation, notwithstanding that there are many trivial good features in the proposed law.

Fortunately indications are that among sophisticated people, only an insignificant minority favors the new law.

You may ask how it is possible that the fine capable men on the Commission came up with such unfortunate proposals. The answer is, I believe, that they are mainly by experience knowledgeable in problems of government and large corporations, with inadequate representation of small inventors and small companies. And let's face it, most of them do not know much about the subject. (Applause)

MODERATOR FROST: Thank you, Joe for an interesting and effective presentation. I am sure nobody here has any doubt that the subject we are discussing is controversial.

We will dismiss for lunch and I would like to suggest that since we are dismissing early, let us get back to work early.

We will see you in an hour.

(Whereupon, at 12:05 p.m., the meeting recessed, to reconvene at 1:00 p.m. on the same day.)

MODERATOR FROST: Can we come to order, gentlemen?

I think, as you will recall, we had time enough before the luncheon break to hear the views of Joe Jackson, which views were not difficult to understand, or to understand where Joe stands on some of this.

I think we started out very nicely in an atmosphere here of expressing views vigorously and strongly, and I would like to think we are on the way to a stimulating and possibly argumentative session here.

Our next speaker is Gerry Mossinghoff, who is in the public service. He is Director of Legislative Planning at the Patent Office. He was formerly in the Office of the General Counsel of the National Aeronautics and Space Administration. Gerry received a degree of Bachelor of Science from St. Louis University and I am happy to say he also has a Juris Doctor degree from The George Washington University.

Lastly, he served as Patent Examiner from 1957 to 1961. With that I introduce to you Gerry Mossinghoff with the expectation we will hear a little different side of the story of the proposed Bill.

GERALD J. MOSSINGHOFF

I appreciate the opportunity to be here today and to appear on this panel with the other distinguished members. Mr. Jackson confessed to me at lunch that, despite the implications you might have gotten from his presentation, he does not support the Bill in all of its particulars.

In the title of this session the question is asked—I assume not

rhetorically—"Will [the] Proposed Legislation Deriving from the Report of the President's Commission Meet the Challenge?"

Appropriately, this leaves it to the individual speakers not only to provide their answer to the question, but perhaps more significantly, to define the scope and boundaries of the challenge which must be met. In this context, I can answer the question positively and unequivocally: "The Patent Reform Bill will meet the challenge;" and no one can intelligently disagree with me—at least until I define what I view the challenge to be.

A major premise of the Presidential Commission in shaping their recommendations, and a major premise of the Administration in translating these recommendations into a legislative proposal, is the conclusion that the protection of intellectual property is fundamental to our free enterprise economic and political system. A corollary of this is that if systems protecting intellectual property can be strengthened internationally, the type of economic and political system in which we believe will be correspondingly strengthened.

Another premise underlying the Commission's recommendations is that the effective protection of intellectual property across national boundaries will have an increasingly significant and beneficial impact on the pattern of this country's international trade.

Technological change affects international trade in many ways. It permits us to replace decreasing exports in low-technology products with increasing exports in high-technology products. A recent study of the Secretary of Commerce's Advisory Panel on Invention and Innovation demonstrated this in relation to this country's exports of yarns and fabrics. In 1956, we exported \$187 million of cotton and wool, low-technology products, as compared with only \$125 million of these products exported in 1965, a decrease of \$62 million. During this same period, however, the exports of high-technology synthetic fibers increased from \$158 million to \$241 million, resulting in a net *gain* in exports of yarns and fabrics by the United States of over \$20 million during the ten-year period.

An element of this country's international balance of payments is what is sometimes called the "technological" balance of payments. This international account reflects payments for technical know-how, data and patent royalties. In general, this "technological" balance of payments is favorable to the United States. For example, a study of the Organization for Economic Cooperation and Development (OECD) determined that in 1961 there was a balance favorable to the United States of \$514 million; during this year we received \$577 million in payment for technical know-how, patent licenses, data, et cetera, while

paying out only \$63 million to other countries. There was no attempt to determine the amount either paid or received for patent licenses alone; but patent license agreements are generally regarded as an effective, and sometimes indispensable, vehicle for the interchange of technical data and know-how across national borders. Accordingly, if the "technological" balance of payments is to remain in our favor, it is important that United States businessmen and inventors obtain patent protection on their inventions in other countries.

The United States, of course, does not have a monopoly on the creation of new technology or its exploitation commercially. For example, while transistor technology originated in the United States, and although this country sold over \$10 million worth of transistor radios in world markets in 1966; during this same year we imported \$94 million worth of transistor radios from Japan alone. In this same context, no one would doubt the benefits to the United States economy resulting from the discovery and use of superconductivity by Kamerling Onnes, the Dutch Nobel Laureate; or in the earlier era, of antennas of the type invented by Professor Yagi of Japan. If patents serve as an important incentive to the development, exploitation and marketing of an invention—and I am convinced they do—making the United States patent system more accessible to foreign applicants would necessarily stimulate the use and development of valuable foreign technology in this country.

This whole area of the popularized "technology gap," the "technological" balance of payments and the efforts toward export expansion is highly complex, involving economic, social and political considerations as yet not precisely defined. There is general agreement, however, that to serve as a stimulus to international trade and lead to an improved standard of living in all countries of the world, the legal systems protecting new technology should facilitate the transfer of this new technology across national borders, while at the same time provide adequate protection and incentives for the creators of the new technology.

The first aspect of the "challenge" which must be met, therefore, is to provide the legal framework to facilitate this interchange of technology under an effective system of legal protection.

The second and overriding aspect of the "challenge" which must be met by the United States patent system is the role ordained for it by the Constitution. It must "promote the progress of science and the useful arts" to the greatest extent possible; and it must do this in the framework of a social and legal tradition in which monopolies are well defined and carefully circumscribed exceptions to the general rule of

free and open competition. To be justified in this environment, the patent system must continue to serve effectively its Constitutional purpose of promoting early public disclosure and use of technological advances.

Much of the opposition to the Presidential Commission's recommendations is based on the belief that the patent system was intended under the Constitution to secure an inventor's natural or moral rights to his invention. Those who take this position either overlook or choose to ignore the fact that the Supreme Court has emphasized that the Constitution makes no provision for the moral or inherent rights of the inventor. In tracing the history of the United States patent system, Justice Clark, speaking for a unanimous Supreme Court in *Graham v. John Deere Corporation*, 383 U. S. 1 (1966), was clear in the conclusion that "the patent monopoly was not designed to secure the inventor his natural right in his discoveries. Rather, it was a reward, an inducement, to bring forth new knowledge."

The patent system, therefore, was indeed intended to serve the interests of scientists and inventors; but overriding this, the system was designed to serve the interest of the public.

The fact that a patent grant has this dual aspect—creating rights for the inventor while serving the public interest—led to a number of the Commission's recommendations, including the most far-reaching and controversial: that the United States adopt a first-to-file or filing date system of priority.

Under the patent system there is, in effect, an exchange between the inventor and society. In return for disclosure to the public, the state will grant a legal monopoly when a person has made an invention. This monopoly is granted—and quite properly and beneficially in my view—notwithstanding, as I have said, the aversion to monopolies which characterizes our free enterprise system. Based upon this concept of the patent system, however, it is an anomaly for the state to give a monopoly to anyone but the inventor who first took steps under the patent system to make the invention available to the public.

This factor, among others, led the President's Commission to conclude that where there are competing claims to the same invention it would be as equitable—and certainly more in keeping with the disclosure promoting concept underlying the patent system—to award the limited monopoly which a patent confers to the inventor, in the Commission's words, "who first appreciated the worth of the invention and promptly acted to make the invention available to the public." Since the first step in making the invention available to the public under the patent system is the filing of a patent application, the

Commission recommended, and the Patent Reform Bill would establish, a system which gives a patent to the first to file.

The proposed first-to-file system would increase the quality and reliability of United States patents:

(1) By removing the uncertainties which necessarily arise when events and dates prior to filing an application are proved by oral testimony or affidavits;

(2) By eliminating the defense of prior inventorship under 35 U.S.C. 102 (g) which can now be urged by someone who took no active steps to make his invention known to the public.

Complemented by the preliminary application technique, the filing date system of priority will reduce the time and expense of obtaining a patent by eliminating the burdensome interference practice and the necessity of keeping witnessed or corroborated records to establish early dates of conception. Preliminary applications, if properly used, will be of obvious advantage to small businesses and individual inventors who may wish to establish an early legal filing date, but who are not ready to pay the substantial fees for the preparation and filing of a formal application.

The proposed system of priority will necessitate the prompt filing of patent applications by inventors and their attorneys. This, together with the publication of patent applications by the Patent Office after 24 months, will hasten the public disclosure of new technology and inform the public of the inventor's rights.

The international implications of the first-to-file recommendation are apparent. Seventy-four of the 77 countries which belong to the Paris Union base priority on a first-to-file basis. The United States, Canada, and the Philippines are the only countries which base priority on a "first-to-invent" basis. And a Royal Commission in Canada, empaneled to study their patent system, strongly urged in 1960 that Canada amend its laws to award priority on a first-to-file basis. As an aside, we understand that Canadian officials are now actively considering this recommendation, particularly in light of steps towards international cooperation in the patent field.

As Dave Allen, Acting Director of the Office of International Patent and Trademark Affairs of the Patent Office, will outline later, the draft of a proposed Patent Cooperation Treaty was released in Geneva on May 31 by BIRPI, the Secretariat for the Paris Convention. A copy of this treaty was published in the June 13 issue of the Official Gazette.

As Commissioner Brenner noted in a press conference releasing the treaty on June 1, full participation in Phase II of the treaty, which

would involve the issuance of international Certificates of Patentability, would, as the treaty is now drafted, require a first-to-file system of priority.

Under Article 27 of the treaty, a Certificate of Patentability transmitted to this country from abroad could be rejected within a year on various grounds including the existence of prior art or the fact that the invention was not patentable under national laws. This latter category would include, for example, atomic weapons in the United States or drug compounds in Italy. The draft treaty, however, makes no provision for the rejection of a Certificate of Patentability on the ground that an applicant of a later filed application could prove acts in this country establishing a conception of the invention prior to the international filing date. Adoption of a filing date system of priority, in one form or another, therefore, would be essential for the participation by the United States in Phase II of the proposed treaty.

In releasing the proposed treaty, Dr. Hollomon, Acting Under Secretary of Commerce, characterized it as "a major step toward the long-range goal of a universal patent system." Commissioner Brenner observed that a major advantage of the treaty is that "it will form the basis for the buildup of mutual respect and confidence among the patent offices of the world as an indispensable step toward the ultimate goal of a universal patent system."

Mr. Eugene Braderman, Deputy Assistant Secretary of State, stressed the importance of the treaty to the developing countries many of which are today unable to support adequate patent examining procedures. He stated:

The proposed system offers a clear and simple solution to this dilemma by enabling such countries to utilize a search and examination system developed through an international bureau. Thus, we believe that the developing countries would also benefit from the proposed system in being able to offer meaningful protection for inventors and businessmen, as well as for foreign investors who consider the effective protection of inventions as an important factor in the total climate for investment in these countries.

Although the proposed treaty is still in the formative stages, there is no doubt that its release is a milestone in the development of an intellectual property system, in the words of the theme of this meeting, for greater social progress.

In summary, then, the challenge to be met, in my view, has two aspects:

(1) To design a patent system which inherently achieves the constitutional purpose of prompt public disclosure and use of new technology; and

(2) To insure that such a system will facilitate the interchange of new technology across national borders under an effective incentive system of legal protection.

The recommendations of the President's Commission, including the controversial first-to-file feature, complemented by the historic efforts toward closer international cooperation in the patent field will, I am firmly convinced, serve to meet this challenge. (Applause)

MODERATOR FROST: Our next speaker comes to us from the Department of Justice. Hayward Brown is a person who has probably had to do with as much defensive patent litigation as anybody in the whole of the United States. As such, he brings to us an experience that is quite different from that of other phases of the government service.

Hayward got his law degree from The George Washington University in 1929. He began his career as a Patent Examiner. He was a patent attorney in the Office of the Judge Advocate General of the Navy from 1931 to 1936, and as an attorney he was assigned to the Patent Section, Civil Division of the Department of Justice from 1936 to 1950.

Hayward Brown.

T. HAYWARD BROWN

Mr. Chairman and ladies and gentlemen; I am going to talk today about the litigation aspects of the proposed legislation. It will eliminate the interference proceedings at all levels, in the Patent Office and in the courts having jurisdiction thereof on appeal or by *de novo* action.

In the matter of appeals from the Board of Appeals of the Patent Office to the courts, both H.R. 5924 and S. 1042 follow present practice providing for alternative remedies by appeal to the Court of Customs and Patent Appeals, or by a civil action in the district court.

Section 147 of each of these bills provides for an appeal to the United States Court of Appeals for the District of Columbia from a decision of the Court of Customs and Patent Appeals. This change represents a real departure from the present practice where the only

review provided is by way of a petition to the United States Supreme Court for a writ of *certiorari*.

I won't say anything about whether I like that or do not like it, but it does give an applicant a chance to have one more appeal. I know that is a little funny, having a five-judge court supervised by a three-judge court.

In a field somewhat akin to litigation the proposed legislation provides that: "Any person, or the head of an agency or department of the government, may, within three years from the issuance of a patent, petition the Patent Office for a determination that a claim of such patent is invalid in view of designated patents or publications."

I am in complete agreement that some form of third party action would be desirable and could help to eliminate invalid patents without the major expense of full scale patent litigation.

However, it seems doubtful that the proposed opposition and cancellation proceedings will accomplish this purpose for a number of reasons, most significant of which is that the average patent attorney will be reluctant to recommend the use of such procedure to his clients.

Under our present interference practice, a party involved in such a proceeding is given an opportunity to find pertinent prior art for the purpose of establishing unpatentability of a patent claim during the so-called motion period. Those attorneys who have had an opportunity to use this procedure will testify that their successes have been few and far between. Many persons argue that any attempt to convince an Examiner of the unpatentability of a claim, once he has allowed it, is futile since they feel that the Examiner is predisposed to a finding of patentability in view of his prior action. Whatever his reason, the Examiner's failure to reverse his position in a significant number of cases is an historical fact. The proposed opposition and cancellation proceedings would appear to offer less opportunity for success in view of the fact that they have been established on an *ex parte* basis. Thus a third party who cites new art to the Patent Office will not be given the opportunity to rebut an applicant's interpretation of the references. Furthermore, he will apparently have no opportunity to comment on amendments to claim which may be made by the applicants in an attempt to avoid the newly cited art.

Since the law provides that a patent is presumptively valid over prior art considered in the Patent Office prosecution, it is my belief that attorneys will be reluctant to rely on opposition or cancellation proceedings unless they are accorded the same type of full *inter partes*

hearing that would be available in a court of law on the question of validity. There can be little doubt that the bulk of such opposition and cancellation proceedings will arise in cases where there is actual or potential infringement by the opposing party. Clearly the risk of having a patent declared valid in a summary Patent Office proceeding far outweighs the cost of the litigation where this is the case.

In the field of infringement litigation several changes of considerable interest have been proposed by the President's Commission. Section 102 (a) of each of the bills engendered by the Commission's recommendations provides that an invention in public use or on sale anywhere in the world will invalidate a later filed patent. This provision merely gives due recognition to the ever increasing mobility of our population and to the advanced state of the technology in the communication field. This provision will undoubtedly serve to improve the quality of adjudicated United States patents, but it may add significantly to the burdens of counsel and the courts in infringement suits.

Section 273 provides damages for unauthorized practice of an invention occurring before issuance of a patent under certain specified conditions. This provision will increase the burden on counsel and the courts involved in only a relatively few cases.

Section 294, providing that a patent claim finally held invalid would be treated as cancelled from the patent, and the patentee would not thereafter be able to clutter crowded court dockets and subject others to costly litigation on the same claim, appears to provide a major advance. Although this proposal is opposed by certain attorneys who appear principally for patentees, many defendants' lawyers believe that enactment of this section would be a great step forward in eliminating redundant and vexatious litigation.

Another provision designed to reduce the cost of litigation is set forth in Section 757 of these bills. This section provides that when the volume of litigation arising under the patent laws so justifies, the court may appoint one or more Civil Commissioners who shall be subject to removal by the court, and shall devote all of their time to the duties of the office.

These Commissioners would regulate and control the conduct of all discovery proceedings, preside over any oral examination for discovery of parties, officers, directors and managing agents or associations; preside over any pretrial hearings, and make any necessary orders with respect thereto and as a result thereof. The Commissioners here would be somewhat like the pretrial Commissioners that have been established by certain of the several district courts and somewhat like the

Commissioners of the Court of Claims, although the powers of the Commissioners are not as broad as those provided Commissioners of the Court of Claims in that the Commissioner's authority does not extend to the actual trial itself. It is believed that these civil commissioners may serve a useful function in certain districts and somewhat speed up the patent trial process.

One last major problem that may be inherent in the proposals of the Commission stems from the provision for the filing of informal preliminary applications. The Commission suggests that the preliminary application would be an informal document which would be filed without claims and need not be prepared by a patent attorney. It further suggests that an applicant could file a number of these informal disclosures as his invention was developed within the year allowed for filing a complete application. The Commission states that the Patent Office would not be burdened since it would only date and file away the preliminary disclosure and examine only the complete application.

While the Commission's arguments as to how the proposed system meets the objectives are superficially logical, upon closer examination it would appear that in actual practice neither the savings in time nor money by both inventors and the Patent Office will be effected. Furthermore, while the public disclosure of technological advance may be accelerated by the proposed system, the quality and value of that disclosure, already at a low level in the eyes of many members of the scientific community, particularly in the chemical and process fields, might decline to a point of doubtful value. In short, the first-to-file preliminary application proposal of the pending legislation may not accomplish to a significant degree any of the objectives set forth by the Commission.

Let us analyze some of the reasons for this last statement. According to the proposal, the preliminary application would only be good for what it discloses. Material not included in the first preliminary application could be barred from the final claims of an inventor by an intervening application or publication. The easiest method of avoiding such a result is the filing of a preliminary application which is much broader than the seeds of invention just conceived by an inventor.

The preparation of such a disclosure is usually beyond the professional competence of the average inventor, but is the every day work of the attorney. It is likely that a preliminary application in the first-to-file system, where little time can be risked on an earnest reduction to practice prior to filing, will quickly evolve into a science-fiction endeavor on the part of skilled patent attorneys. Indeed, in many

instances the application will probably come closer to a research proposal rather than the result of actual research.

Thus, as a practical matter those inventors who choose to file informal preliminary applications on their own would be seriously disadvantaged. In all likelihood not many sophisticated inventors or corporations will be willing to run this risk. The apparent result of this proliferation of preliminary and complete applications contrary to the objectives of the proposed system may be a reduction in the value of the technical disclosure and an increase in the cost of obtaining and sustaining a patent.

It is not believed that the preliminary applications can be merely dated, stamped and filed. Under present practice a patent Examiner cites any reference bearing a publication date, or filing date, prior to the filing date of the application being examined. If the publication date is within one year of an applicant's filing date, he may submit an affidavit, usually referred to as a Rule 131 affidavit, in an attempt to establish that he invented the subject matter being claimed prior to the date of the publication cited as a reference.

The Commission suggests that this costly and time consuming procedure is eliminated by the proposed new system. In actual fact, the burden on the applicant, the Patent Office, and the courts, may be greater in this instance than the burden created by the present law.

Since an applicant, under the proposed new system, would only be entitled to an effective filing date based upon actual disclosure in a preliminary application, an Examiner would not know, upon reading the contents of the complete application, which parts of that disclosure were supported by earlier preliminary applications. He therefore would not know whether a particular publication was a valid reference unless he first reviewed all of the preliminary applications upon which a complete application was based.

Of course, the Examiner could merely reject the claims on such publications and shift the burden to the applicant to argue that a preliminary application bearing a date earlier than the publication date disclosed the disputed subject matter. However, the Examiner would at least be forced to review the preliminary application in the light of an applicant's argument to determine whether or not he was citing a valid reference. Obviously the entire procedure is not significantly different from the present procedure using Rule 131 affidavits, and could in fact be even more burdensome where a complete application was based on a chain of several preliminary applications.

Since the present law provides for Rule 131 affidavits only where the cited publication has a date within one year of an applicant's filing

date, and since a proposed time span between a preliminary and complete application is also one year, it would appear that the number of instances where a review of the preliminary applications would be necessitated under the proposed new law will be about equal in number to the number of Rule 131 affidavits which an Examiner must consider under the present statute. It has also been urged that the first-to-file preliminary application system will eliminate the burdensome interference procedure of our present system. As in the case of Rule 131 affidavits, the preliminary application procedure will also cause priority date conflicts.

Without going into detailed examples, it should be evident that where two complete applications claim the same subject matter and bear relatively close filing dates it will not be sufficient for the Examiner to simply reject the last filed application in view of the earlier application since it is likely that each of the applications is based upon one or more preliminary applications.

The Examiner must determine which party was the first to disclose the claimed subject matter in a preliminary application. Thus, before the Examiner may properly dispose of one application or the other, he must first review the preliminary applications of the parties to determine who was the first to disclose the claimed subject matter.

It should be further evident that such priority determinations could be exceedingly difficult where the disclosure in the preliminary applications of the adverse parties is overlapping; that is, where the preliminary application of one party first discloses part of the invention claimed and the preliminary application of the other party first discloses another feature of the invention claimed.

The courts, in passing upon the validity of patent claims, would, in many instances, have to consider the preliminary applications as well as the complete application. Otherwise, the preliminary application would be meaningless. This would add still further to the tremendous reading task of a judge hearing a patent case, and would also add to the work of counsel presenting the case to the court.

In summary, my comments on the proposed legislation emanating from the President's Commission Report are probably best summarized by stating that while I believe there are many excellent features in the legislation which should be enacted into law, the major objectives which are characterized by the major changes in the law which I have discussed do not appear to be attainable by the proposed new system.

Critics of my analysis will no doubt immediately say that it is absurd to conclude that radical changes in the law are not necessary at a time

when the Patent Office is staggered by a large backlog and when long delays in the Patent Office are commonplace. However, I believe that there is more than one way to approach this problem.

We can either drastically change the system so it can handle a larger volume in less time, for example, by a registration system; we can keep the system completely intact by increasing the work force in the Patent Office; or we can attempt to find ways of reducing the number of applications going through the system.

I believe that this last approach will ultimately prove to be the most fruitful and desirable.

Thank you. (Applause)

MODERATOR FROST: Our next speaker took his training at Miami University and The George Washington University. He received his law degree at The George Washington University. From 1930 to 1935 he was an Examiner in the Patent Office. From 1935 to 1936 he was in the Legal Division of the NRA. That sounds like a long time ago.

In any event, in 1936—I recall that was when we were still having a depression—he entered the practice of patent law in New York City, and he has been practicing patent law in the city ever since. He is now senior member of Keith, Johnston and Isner in New York City.

I introduce to you Al Johnston.

ALBERT C. JOHNSTON

It is very reassuring to follow Mr. Brown and learn that there is someone in the government echelon who looks at the problems of litigation and enforcement in very much, although not entirely, the same way many of us in private practice are inclined to view these problems.

When we get into the area of review, it would be presumptuous to hope to improve upon what Judge Rich has indicated in his article in the May issue of *The George Washington Law Review*.

I hope however that I can contribute a personal view of the matter before us, based upon a considerable amount of attention that has

been devoted to the President's Commission Report and the Bill, and to previous studies of the problems on behalf of the New York Patent Law Association.

We have, I think, to look first at what is the real challenge confronting our patent system, because the Bill and the Report purport to deal with that aspect of the matter. It seems to me that there are three basic problems in our system.

The first of these is the problem of the unreliability of patents, which comes primarily from the lack of a way to be certain that all of the prior art is brought to bear upon each case. This is a problem of gathering and applying all the pertinent evidence.

The second is the problem of the growing number of inventions and of applications to be dealt with, both by the Bar and by the Patent Office. This is an administrative problem, a personnel problem, and a time problem.

The third is the problem of reducing expense and uncertainty and delay in the procurement of patents and in the enforcement of them. This, like the other two, finds most of its origins in the problem of gathering and applying the pertinent evidence.

From my analysis of the Report, I find in it no remedy for this basic aspect of the matter. I find in it two proposals that would help, perhaps—but subject to the very great caveat that Mr. Brown has indicated—to bring the prior art to bear upon the case. Those two, of course, are the provisions for pre-patent publication and for opposition proceedings.

As Mr. Brown has indicated, however, the lawyer concerned about a potential law suit in the future is going to be very reluctant to make use of either of those procedures for citation of the closest prior art known to his client. So we get into the question: How can one surmount this fundamental problem of bringing the prior art to bear upon the case?

A year and a half ago the New York Patent Law Association had a proposal in that regard. In effect it would have involved the handling of an application on a short-cut or "stepped examination" basis, with the determination of form and novelty followed by publication of a provisional patent, followed by an unlimited period in which art could be brought to the record by anyone and then by an ultimate determination of its enforceability and confirmation of it as a patent by further examination proceedings before it could be asserted in a litigation. That or a similar sort of thing has been proposed by other groups; it has not been a part of the Commission's Report.

I believe, judging from my own experience, that at least half of the

issues of litigation arise from the fact that the prior art has not been fully developed beforehand. And I think that we need to regard this condition of uncertainty as being at the core of the whole challenge to our patent system.

If we had a perfect way of bringing all the facts to bear upon a given invention at the time rights to it are being asserted, then it would be a relatively easy and normal task for men to determine whether or not that invention met the conditions of the law that would entitle it to protection.

But we do not have that system, and we must find a way to substitute for the lack of it or to bring what we have to a stage of sufficient perfection that it will enable one to know where he stands on at least a large preponderance of the patents that issue.

The only alternative to perfecting the process of finding and citing the prior art would be to have a system of law that so cut down the range of prior art and so cut down the uncertainties of what is contained in the prior art that, just by narrowing down the range of inquiry into earlier disclosures, we could be reasonably sure of having collected all the facts needed in order to reach a reliable judgment as to the validity or invalidity of a given claim.

The essence of this problem of uncertainty comes down, I believe, to this: That there is not any such thing as a determination of novelty as an absolute thing. There is not any such thing as a determination of nonobviousness as an absolute thing. Legal "novelty" and nonobviousness are both negatives; and every law student is taught that you cannot prove a negative. We say that something is new, and we say it is not obvious, because, in our frame of reference, it appears so. But we can never be sure that our frame of reference has encompassed all the elements that must be considered in order for the mind to arrive at a valid conclusion.

So we have the problem of trying to get each case fully related to a reliable frame of reference, so that one can make a judgment that will be accepted by human beings as a basis for human activity.

This comes first when the case reaches counsel engaged to get the patent. He may make a search and arrive at the conclusion that he has what is likely to be the pertinent material, and then he draws his case. But he misses something in the search process, this can make the filing of the application a complete futility. The same process goes on at the Examiner's level. He collects what he thinks is pertinent, but often he fails to think about other areas that may be pertinent or to have access to evidence of prior work in the art, or to collect all that is important.

Then too at each level you have the question of subjective judgment entering the picture, as to whether the case is a good one or not—and so on, even after the patent has been issued. It results that when you go into court, a defendant having diligent counsel will be certain to collect additional material to defend. And at the time the next infringer is around, a more vigorous lawyer may find more material. So the matter is never settled, and it can never be settled until a rule of law says "this settles it."

With this fundamental problem in the picture, it is a very strange thing to read in the President's letter of transmittal to the Congress, February 21, 1967, this statement, "Under the Patent Reform Act, in every case the inventor would be required to show that his invention is really new."

The inventor *cannot* show that the invention is really new! He can only believe it. No one can show that it is really new.

When we look at the Report with this problem in mind, we find that it really gives us no way to come to grips with the needs. Failing to do so—in respect to publication and opposition proceedings for the reasons Mr. Brown indicated—it is very difficult to understand its ground for proposing to extend the range of prior art to knowledge or use any place in the world.

These are facts that no patent office any place in the world can determine. No human being can ever determine them exhaustively. The consequence of any such rule would be that no patent could ever be known to be valid. It could only be accepted to be such because people chose to accept it, not because they knew it. This means by parity that the wealthy defendant who had the resources and the inducement to do so could very easily, and doubtless would, make the matter of enforcement of a patent on behalf of a small or not wealthy person a virtual impossibility.

These are some of the aspects of the enforcement side that I think make the Report and the Bill a very dangerous thing from the standpoint of coming to face with the real core issue that confronts our patent system. There are some other things in the Report that I would like to comment on briefly.

I think that it would tend to reduce justice, to increase expense and delay of review, in its provision for a presumption of correction of Patent Office decision, and in its provision for an appeal from the CCPA.

I have never heard of any man at the Bar, any inventor, or any businessman, urging that there be an appeal from the CCPA. I have never heard of any principle of judicial administration, or of any plan

for the conservation of judicial effort, that would add a third appeal to an already two-legged and complex review procedure that applies to rejected applications for patents.

That particular provision seems to me to involve some disagreement on the part of the Patent Office with the view of the court, as to what is the law. It seems to seek a sort of subordination of the court, because of something of that nature. There are provisions in the Report which, I believe, would reduce the equity and justice of our proceedings.

One example is the proposals of "no broadened reissue." It is just as likely and just as common that a patent solicitor uses the wrong word to unduly narrow his client's patent, as that he uses the wrong one to make it unduly broad; and for this reason, the remedial reissue provision of the 1952 Act should not be abandoned.

Plainly, broadened reissue is a remedial thing. The elimination of it can only add to the expense and complexity of enforcement proceedings in many cases where such a device is effective for the purpose for which it was intended in 1952 law.

There are some provisions in the Report which will improve things or give needed remedy:

The 20-year term is one.

The interim protection provision, in the event of prepatent publication of an application, is another.

The provision for protection against importation of a product of a patented process is another. Let it be noted here that while the Report recommended that remedy, the Bill puts a limitation upon it, which in many instances would destroy its effect in a curious way by providing that the remedy would not be available if process patent protection were available in the country of origin of the importation.

With regard to enforcement, the principle recommendation of the Report is that discovery proceedings in patent infringement suits be put under the supervision of Civil Commissioners in the United States District Courts.

We have a semi-kind of Commissioner system in the Southern District of New York, with pretrial Examiners. That system does not work well. The District Courts in New York are trying to get closer to a system of assigning patent cases to individual judges, in order to have a more effective control of proceedings that, too often, work to delay justice or to make it too costly to obtain. The Civil Commissioner proposal would, I believe, add to the costs and the complexity of patent enforcement.

Finally, I think comment should be made on the provision for *in rem* invalidity. I regard this as a half-way measure designed to reduce

the number of litigations; but there is inequity in it in the sense that while it would tend in theory to reduce the number of suits by barring the patentees right to enforce in a second suit, it has no corollary inhibition on the infringer.

In cases of multiple infringements, which do require several suits, this would be a great inducement to the separate defendants, the infringers, pressing the patentee to the wall—and believe me, there are many cases where the patentee gets pressed to the wall. He loses because he cannot withstand the economic problems of the litigation arena.

Indeed, the proposal would go so far that a losing infringer, as I read the Bill, would be able to contribute to and support some other infringer in continuing to fight the patent, and he would certainly be encouraged to do so, because under the proposed Bill, all liability under the patent would cease once there had been a holding, a final holding, that it was invalid or not infringed.

So all in all, I feel that the Bill and the Report do not come to grips with the basic problem in the Patent Office or with the basic problem in the arena of litigation and enforcement.

Thank you. (Applause)

MODERATOR FROST: Our next speaker will be a government representative David B. Allen. Mr. Allen received his law degree from the University of Cincinnati in 1949. He was head of the Trademark Department of Procter & Gamble from 1953 to 1964. Since 1964 he has been with the United States Patent Office. He is also a past President of the Cincinnati Patent Law Association.

David Allen.

DAVID ALLEN

Thank you, George.

It is a little tough to find jokes for a meeting of this group because it covers such a broad scope of industrial and intellectual property. I was really stuck until one night the newsstand where I usually buy

the Star was out of that paper. They still had some copies of the Daily News there and I found in the News a story which covers patents, trademarks, copyrights and unfair competition, all in one story. So I thought this would be of interest.

The story was about humorous letters to the Colgate-Palmolive Company which are received from consumers. One involved an inventor-type businessman in Houston who wrote to Colgate as follows: "Gentlemen, I would like to buy some empty toothpaste tubes from your firm on account I am fixing to start making toothpaste, and if I sell it in tubes with your name on it, I won't have to do no advertising.

"I am sure that you can spare me some empty tubes on account you won't need many when I start selling mine, because I think I can sell it a lot cheaper and that way you won't get stuck with a lot of empty tubes.

"I have already mixed up a batch of toothpaste, and I wish you would tell me how to get the 'gook' into the tubes when you send them to me."

I thought that story covered the waterfront of subject matter with which we are dealing in this Conference.

One year ago, at the Award Dinner of the Tenth Annual Public Conference of this Institute, David Sarnoff, Board Chairman of RCA and distinguished recipient of the Kettering Award, made the following statement: "One of today's principal challenges is to design an international patent structure that can accommodate the revolutionary changes in technology and spread its benefits more evenly around the world.

"Through the tremendous advances that have been made in one aspect of this technology—in communications—the physical means are available to accomplish this purpose."

I was in the audience when General Sarnoff made this statement and remember noticing the many raised eyebrows and other visible signs of doubt among persons in that audience, all of whom seemed to be saying: "That's all very good, Mr. Sarnoff, but surely such a goal is today no more than a faint glimmer of hope on the horizon."

Nevertheless, in the year which has intervened, there have been numerous developments in the field of international patent cooperation which must, I believe, be recognized as realistic and tangible steps toward the international patent structure which he envisioned.

September 29, 1966: The Executive Committee of the Paris Union, broadly representative of the world patent community, unanimously adopted a resolution presented to it by the United States recommending that the Director of BIRPI, the Secretariat for this Union,

undertake urgently a study of solutions to the critical international patent problems.

December 2, 1966: The President's Commission on the Patent System in the United States expressed in Recommendation 35 its firm belief that the ultimate goal in the protection of inventions should be the establishment of a universal patent and urged specific steps toward attainment of that goal.

February 21, 1967: The President communicated to Congress "The Patent Reform Act of 1967," including, as Gerry Mossinghoff has pointed out, a number of provisions of great significance from the standpoint of international harmonization of patent law.

May 31, 1967: The Director of BIRPI, having consulted experts from the International Patent Institute and from six countries with the highest number of patent applications, released a draft Patent Cooperation Treaty, the aim of which is to facilitate the filing and examination of applications for the protection of the same invention in a number of countries.

Finally, while we are meeting here, representatives of member countries of all of the conventions administered by BIRPI are meeting in Stockholm, Sweden, for the purpose of creating a streamlined organizational structure for this international bureau in order to better equip it to move forward with the development, negotiation, and implementation of international cooperation in the patent field as well as in the other fields of its concern.

The Patent Cooperation Treaty was received by the United States just three weeks ago and we promptly arranged for its publication in the Official Gazette of June 13th, so that a full opportunity for discussion by all interested parties would be possible before the next international meeting of experts scheduled for October 2-10 of this year.

The time available to me today does not permit a description of the proposed Treaty. However, I would like to review very briefly several of its principal features in the context of international patent problems which have been reported to us.

In introducing this Conference, Professor Harris emphasized the importance of facts in the presentation of participants. For factual data on these problems, I shall draw upon the results of an international patent survey conducted by the Office of International Patent and Trademark Affairs in the fall of 1965. I think it may be helpful to indicate to what extent the Treaty draft seeks to respond to the problems viewed by American businessmen in connection with their efforts to obtain effective patent protection in world markets.

First, a word about the survey itself. The questionnaires from which the data was compiled were sent to 235 companies which were the assignees of more than 200 or more United States patents between the period beginning on January 1, 1942 and ending on December 31, 1962.

We owe a debt of gratitude to the staff of The PTC Research Institute for this list which was prepared by them in cooperation with the Patent Office Library staff, especially since it represented the best available sample of reasonable size from which to determine the experience of American companies in international patent activities.

Of the 235 questionnaires mailed, 140 replies, or approximately 60 percent of the total, were returned with usable data. We considered this to be an excellent response which in and of itself was an important indicator of the extent of interest in the subject of international patent cooperation.

The portion of the survey which I would like to review with you today in relation to the proposed Treaty is one which asked these companies to list and evaluate the significant problems encountered by them in international patent practice.

First, a large oil company: "Our principal problem is the multiplication of foreign applications required to protect an important invention and the accompanying cost of these applications."

Over 50 other companies shared this view.

Now, an electronics company: "The most important problem in the prosecution of an application is the language barrier encountered in non-English speaking countries."

Thirty other companies considered this to be a major problem.

A leading drug company: "Lack of unity as to the formal requirements of filing in the various countries occasions cost that could be avoided by uniformity."

Forty other companies reported basically the same view.

A large automotive manufacturing company: "Our most significant problem is the necessity of dealing with many different patent laws and standards of patentability."

Over 90 other companies indicated that they had experienced difficulty in this area.

Finally, the views of the majority of the 140 companies reporting were, in a sense, summed up by the statement of a leading chemical firm: "Our most important international patent problem is the waste of trained manpower brought about by the need for filing patent applications of the same inventor on the same invention in separate patent offices—each with its own peculiar requirements as to form of

the application and varying rules and regulations and controlling law, and each patent office making its own search of the prior art and dealing with the patent application as if it were the only application in the world on that invention."

Now let us turn our attention to the plan under the Treaty draft for seeking patent protection of the same invention in a number of countries. This plan purports to strike at the very heart of the problems just enumerated.

Under the proposed plan, first, the applicant would prepare and file a single international application which could be used by each designated country as a basis for issuing a national patent.

Second, a standard application format would be established as acceptable for all member countries.

Third, a properly filed international application would establish a single filing date effective in all of the member countries in which protection is desired.

Fourth, an international application filed in one of the four official languages—English, French, German and Russian—of the treaty would be accepted as an effective filing in all countries, with translation into other languages required only if and when the applicant decides to go forward with the case.

Fifth, a single worldwide search would be conducted by a qualified search facility; and sixth, applicants could obtain a "Certificate of Patentability" which would certify on the basis of an international search and examination, that the invention is patentable. Communication of this certificate to designated member countries would provide the basis for issuance of national patents.

Sometime ago, a patent attorney for one of our leading companies said to us, "You keep asking us what are our problems in international patents. We all know what the problems are. What we want to hear about are solutions."

Certainly, none of us are naive enough to believe that promulgation of the proposed Patent Cooperation Treaty would be the end of the road. However, it seems to us it represents substantial progress along the road toward General Sarnoff's goal. It is a framework, within which the farther reaching universal patent concepts can be built.

How soon these eventual goals can be achieved depends, you may be sure, on how strongly we believe in the statement of David Sarnoff that, "It is now technically feasible to establish a universal patent system, utilizing the latest communications devices and concepts, to bring swiftness, order and reasonable uniformity to the entire patent structure."

To those of you who continue to experience a "raising of eyebrows" whenever these ultimate goals are so boldly stated, I would say that the proposed Treaty has been designed to accommodate as many of these concepts as the world is willing to support.

Even if you are not inclined to believe as strongly as General Sarnoff and others who have echoed his words, in the present feasibility of such far reaching steps, the Treaty has also adopted the very practical approach of attacking first those problems which the users of the patent system believe to be the most important.

Thank you. (Applause)

MODERATOR FROST: Our next speaker is Malcolm W. Parry of Langer, Parry, Card and Langner. Mr. Parry:

MALCOLM W. PARRY

Thank you, George.

My task today is that of attempting to project, in terms of probable effect in the United States, the foreign experience with patent law provisions which have counterparts, either identical or basically similar, in the proposals of the President's Commission on the Patent System.

An examination of the Commission's proposals from this point of view is certainly warranted, since it is abundantly clear from the Report of the Commission, from subsequent statements of members of the Commission, and from statements emanating from the Patent Office and Commerce Department that an important motivation, if not the principal motivation behind the Commission's proposals is the desire to obtain a harmonization between United States and foreign patent law.

How many times in presentations by members of the Administration have we heard it said in effect, "I am not sure that I can explain the virtue of this suggestion, but please bear in mind that it is in harmony with foreign law."?

For one who has for some years been concerned with foreign patent laws and who has been able in the past to obtain from United States practitioners only grudging condescension in respect of the possible virtues of some procedural aspects of foreign law, it is a rather

startling turnabout to find the vast amount of respect which is not being given to foreign patent law and the eagerness, at least in some circles, to embrace quickly and with very little regard to the consequences provisions of foreign patent law which run counter to long established basic principles of U. S. patent law.

It is my view that the patent law of any country should reflect the legal, social, political and economic philosophy of that particular country and that the best patent law for the United States is that which best serves to advance the interests of the United States. It is naive and unrealistic, I believe, to assume that there is such a harmony between countries in the legal, political, social and economic areas that there is necessarily one model, harmonized patent law, that is best for all of them.

The state of our economic development and well-being as compared to other countries having patent laws proposed to be emulated should be given its proper weight as a measure of the efficacy of the U. S. patent system in the absence of better evidence.

Therefore, I urge that my comments to follow be taken with due regard to the recent admonition of the Section of Patent, Trademark and Copyright Law of the American Bar Association as expressed in its Resolution No. 28 that changes in the United States patent law intended to achieve harmony with foreign patent systems should be resisted "unless it be shown that such changes will favorably affect the domestic operation and effectiveness of the U. S. patent system."

An initial general problem should, I think, be indicated in considering the question as to how the proposals of the Presidential Commission have worked abroad in their foreign law equivalents.

This is the necessity of considering these proposals one at a time. In other words, it is not altogether valid to consider what has been the foreign experience with a certain Commission proposal unless we know that the foreign country in question, having a counterpart to the Commission proposal, also has a provision corresponding to this proposal; and even so, this may not give the true picture if the foreign country has a relevant third provision which is not among the Commission's suggestions.

Only as an example, the Commission has proposed a first-to-file system with an absolute novelty standard. Therefore, as to these proposals, the German experience may not provide a basis for judging these proposals, since under the German law public use outside of Germany does not destroy novelty, and furthermore, under German law there is a grace period of six months prior to filing during which

any publication or public use emanating from the inventor does not destroy novelty.

This is only to say in short that a proposed law can only be finally assessed in the totality of its provisions and unfortunately, from the point of view of true comparison, there is no patent law existing that embodies all of the proposals of the President's Commission.

With these general remarks aside, I shall turn to a particular consideration of those proposals of the President's Commission which bring innovation into the U. S. patent law and which may be said to have a counterpart in some foreign patent law.

Certainly, the one proposal of the Commission which is considered to bring the most drastic change into U. S. patent law and which has caused most controversy and discussion is that a patent be given to the first to file rather than to the first to invent as heretofore. There is no lack of foreign experience in this approach since of all the countries of the world only the United States, Canada and the Philippines have patent laws which go into the question of priority of inventorship. Strangely enough no country except the United States, Canada and the Philippines ever seems to have even considered a patent law which, like the United States, would award a patent to the first inventor.

There has always been this basic difference in law. No country having a first-to-file system has changed over to a first-to-invent system. Similarly, the United States and Canada have remained true to the first inventor approach although the Canadian Royal Commission of 1960 made a rather tentative suggestion which has never been implemented in the Canadian law to go over to a first-to-file system.

Parenthetically, the English patent law still speaks of the "true and first inventor." However, from the inception of the British patent system, this has meant something quite different from our understanding of "true and first inventor" since it originally meant, and still includes, that person first bringing the inventive concept into England whether or not he conceived it. If English law could recognize, and still does recognize as an inventor, a person who had no part in conceiving the invention, then it is not surprising that it can consider the first inventor to be the first to file an application.

It is difficult to ascertain exactly how much the English approach influenced the law of other countries, but certainly the inquiry into priority of inventorship has always been alien to the great majority of patent systems of the world.

What has been the foreign experience with the first-to-file system? I have found practically no one abroad who feels that awarding a patent to the first to file has resulted in unfairness from the point of view of a

patent being awarded to a person who is not the first inventor. However, this failure of foreign practitioners to see any problem in this regard, I think, may arise at least in part, from a long term and complete acceptance of the concept that the first-to-file is the first inventor, so that in fact those living under the first-to-file system are never concerned with who is the first inventor in the United States sense.

In connection with the proposals here to have a first-to-file system, there is probably most often heard the criticism that this will result in a race to the Patent Office. Is there a race in those countries where the first-to-file system exists? In this regard, it is only of value I believe to consider technologically advanced countries where economic competition is as intense as in the United States. In those countries there is no question but that there is a race to the patent office. Has this race to the patent office resulted in rewarding the speculator as opposed to the inventor? There is no answer to this question since in most of the countries where the first-to-file system exists the speculator is the inventor. Under the systems of those countries, a patent can be and is awarded to a person who has arrived at an inventive concept and it is not necessary to describe an invention in detail.

All of you must be aware of the fact that the usual German, Dutch or Japanese patent is only about a page or so in length. It may include drawings or it may not. If drawings are included they may be completely schematic. In chemical cases it is not required to give large numbers of examples. If further exemplification is called for, it can be added during prosecution.

Similarly, the specification can be amplified after filing in respect of utility. A German patent attorney in writing to me has stated it well. "Your present system of 'conception priority' has enabled the requirement and its fulfillment for disclosure 'up to the the last screw or most detailed manipulation,' because the inventor need not be afraid of a 'quicker' working competitor.

"Contrarily thereto, our system of rewarding the first to file cogently requests lower standards as to sufficient disclosure and allows a 'more generalized broad disclosure.'"

A French patent attorney writes: "There is no doubt that this provision causes the applicant to rush to file his application, and evidently compels the inventor to place the application on file before the invention has been thoroughly developed or tested.

"This governing principle has for result that the characteristic which the inventor wishes to protect is described in general terms

which do not entirely find support in the specification. The invention is, consequently, not sufficiently exemplified."

I believe the same could be said in respect of applications in Holland and the Scandinavian countries.

The race to the patent office in Great Britain must be run somewhat differently. This is for the reason that British requirements with respect to application disclosure are more like our own. In Great Britain, the practice is in very many instances to file a provisional application to obtain the earliest possible filing date. This type of application, which must be completed within a year, can be short, generally worded, and without drawings or claims. The President's Commission has recommended a similar procedure in its preliminary application.

The Commission conceives of this as a paper which "could be prepared by someone having little knowledge of patent law and procedure." To the contrary, one who has had experience with British provisional practice knows that this type of application must be most carefully drafted since it must later face the test of affording the basis of priority for claims.

The provisional application under British practice will generate a date only for what it discloses and a person who discloses too little or too poorly may later find his provisional filing was practically worthless. Furthermore, it should be pointed out that the question of deciding whether a claim in a complete application is entitled to the priority date of the provisional application can be most difficult and would introduce a new complication in U. S. patent prosecution.

Summing up, it is my view that the foreign experience indicates that the first-to-file system undoubtedly does result in a race to the Patent Office. Therefore, unless the United States radically changes its present practice as to what constitutes an adequate patent application disclosure, in many instances the race will be won by the organization having the resources and personnel to insure that such adequate disclosure is developed without delay.

In speaking of the first-to-file system, a German attorney has stated this as follows: "Our system is based and can only be successful on two suppositions: (a) thinking in function; and (b) lower standards of detailed disclosure of the invention."

The second most significant proposal of the Commission is the new definition of prior art and the abolition of a grace period. As to the first, the general understanding of the Commission's recommendation and Section 102 of Senate Bill S.1042 embodying these recommendations, is that oral disclosure of an invention would not destroy novelty.

I find it difficult to reach this conclusion. Section 102 states that a person shall not be entitled to a patent if "prior to the effective filing date of the application, the subject matter sought to be patented was known to the public, or made available to the public by means of a disclosure in tangible form." This construction would seem to me to clearly mean that the requirement as to being in tangible form only limits the making available and does not apply to the "known to the public." This arises grammatically from the presence of a comma after "known to the public" and from the use of the word "or." It also arises logically from the fact that if only tangible disclosure made available to the public is a bar, why is it necessary to also state that public knowledge is a bar. How else would public knowledge be obtained other than by disclosure in tangible form, obviously by oral disclosure. The Commission's comments seem to me to strengthen this interpretation.

On page 7 of the Commission Report, it is stated that prior art is "that either publically known or made available in a preservable form." The Commission's use of the word "either" would appear to make it clear that the following "or" is used in the disjunctive sense.

In any event, the Commission's proposal is for some sort of a strict novelty rule with no grace period. This provision can be equated therefore with the present law of France, Holland and Italy. In these countries it is essential that testing of an invention prior to filing be carried out under the greatest security and that all publications concerning the invention be suppressed until an application is filed.

On this problem a Swedish associate has written to me: "A number of scientists whose cases I am handling have pointed out that a similar principle as in U.S.A., Canada and Germany regarding the possibility to file patent applications within a certain period after the first specific publication would be appreciated by them."

On the same question a French associate has written: "The obligation to avoid any divulgation before the filing of an application certainly hinders the tests numerous firms would wish to conduct before filing a patent application.

"However, it is possible and permitted by the French law, to conduct tests at third parties' plants provided they are treated confidentially and that agreements for the secrecy of such tests have been concluded between the parties.

"In cases where drugs have to be tested, the clinical tests are most of the time conducted with drugs not yet patented. These drugs are forwarded to clinical doctors in hospitals under a code number, and

clinical doctors, having no knowledge of chemistry, are unable to analyze the products they are receiving for testing.

"The French firms have not even to make sure that their researchers, whether working in the firm premises or outside the firm, do not publish any information, for any research personnel has, for common practice over here, to inquire on the patent situation before publishing any information."

Before leaving this particular point, I should like to indicate that the German patent law provides a six-month period as to the inventor's own publication and use. The same is true in Japan. The British Act and Acts modeled thereafter, provide a year excusal for public use of the invention for purposes of reasonable trial. Furthermore, it should also be pointed out, I think, that in Great Britain and countries following the British law, such as New Zealand, Australia and Israel, publication of an invention must take place in the country itself in order to constitute a bar.

In other countries such as Switzerland, Sweden, Norway, Denmark, Austria and others, a publication must be in printed form to constitute a bar. In Belgium and Spain any disclosure of an invention resulting from an official publication such as issuance of a corresponding patent is not a bar to a so-called importation patent. Similarly, in most South American countries and in a number of other countries, valid patents can be obtained, notwithstanding the fact that a corresponding patent has issued elsewhere.

I would like to revert for a moment to the language of Section 102 of Senate Bill S.1042 that provides that patentability is defeated if the invention was known to the public prior to the effective filing date of the application. An almost exact counterpart appears in the South African Act where it is provided that an invention is not novel if it was known in South Africa prior to the application effective date.

There has recently come across my desk the decision of the Court of the Commissioner of Patents for the Republic of South Africa in the case of an opposition against the application of W. A. Scholtens Chemische Fabriken. This may be found in the *Patent Journal*, Volume 7, No. 293 of January 11, 1967. Here it was alleged by the opponents that an employee of their German subsidiary came to South Africa and orally disclosed the subject matter of the opposed application to officers of the opposing company. This was established by oral testimony. The opposition was successful and the application was refused, the Court saying, "Knowledge even by a single person, if openly acquired, is sufficient to invalidate a patent." Presumably, a

similar decision could be arrived at under the Commission's proposals concerning prior art.

Particular attention has been directed to the proposal of the Commission that novelty should be destroyed by public use of an invention anywhere before the application filing date. The dangers of such a rule have been much discussed emphasizing particularly the possibility of witnesses from far off parts of the world attesting to use.

What has been the foreign experience in this regard? In this connection, there seems to be a misconception that the law in Italy, France and Holland speaks of an invention lacking novelty if there was public use of the same prior to the filing date. In point of fact, the laws of none of these countries even mentions the word "use." Although the statutory language in these three countries differs somewhat, in general it can be said that novelty is destroyed if the invention has been made known to the public sufficiently in any way to enable it to be carried out.

As a practical matter, if in these countries a patent is sought to be invalidated by a foreign use which is alleged to have made the invention known to the public, the courts have generally held that such making known to the public cannot be completely established by testimony, but must be documented by concrete physical evidence. In any event, it would be almost impossible under the present state of foreign patent law to invalidate a patent on the basis of public use outside the country established by testimony, and I believe that prudence and good sense dictate that the same should be true in the United States. This could be most easily accomplished by excluding from any future legislation foreign public use as a ground for invalidity.

Another facet of the Commission's recommendation with respect to prior art is that a U. S. patent or published application shall constitute prior art as of its effective filing date. The Commission, in its explanatory test states that this provision is a necessary adjunct of a first-to-file system. This reasoning is difficult to follow since in practically all countries having a first-to-file system, there is no such rule, and a patent of earlier date is only citable as to what it claims and is not citable as a prior publication unless it was in fact published before the effective filing date of the application it is to be cited against. The requirement of avoiding conflict of claims with a patent of earlier date is quite sufficient to the issuance of two patents on the same invention.

I believe that probably the next most significant of the Commission's proposals is for publication of pending patent applications. The foreign experience as regards this provision is practically nil since of

major countries only Australia and the Netherlands—the latter quite recently—have had such provisions in their law. Great Britain some years ago had such a provision for applications filed with Convention priority, but this was abandoned with the present 1949 Act.

The experience has been to move away from this. I have found with this early publication, there are two major drawbacks. First, once the publication takes place, this operates as a bar to the filing of further patent applications. Also, I think it will be found that in any country where an application is laid open, the ambit of claims, as laid open, sets the final ambit for protection. I would think that same concept would come into U. S. law.

In summing up, I think it must be apparent from what has been said that evaluation of the Commission's proposals in the light of foreign experience is not clearly fruitful, first because, setting aside the first-to-file proposal, the other proposals of the Commission do not in fact have significant counterparts in existing foreign patent laws.

As to the first-to-file system, I have tried to show that its practical operation would require a drastic change in U. S. patent practice. Finally, I would suggest again that the fact that a particular type of patent system is considered successful in some foreign country having different institutions, economic structure and political philosophy than the United States should not be given great weight in deciding what is best for the United States.

Thank you. (Applause)

MODERATOR FROST: Now we will hear from John R. Shipman, Director of International Patent Operations, International Business Machines Corporation. Mr. Shipman.

JOHN R. SHIPMAN

Being the seventh speaker on this panel, I feel a little like the seventh pup in the litter who finds his mother has feeding facilities only for six. What is left for him?

However, again being something like the seventh pup, I understand that they usually raise enough disturbance around the place to require some attention and get the attention, not only of the mother, but of the brothers and sisters as well.

Therefore, I hope today to be able to raise some points that maybe have not been fully considered before.

In connection with the international aspects of the President's Commission, I have at times heard some disturbing questions and comments such as: why should we be concerned about this international stuff? Our U. S. inventors aren't interested in foreign filing. Why should we make changes for the benefit of foreigners? If the foreign people want more compatibility between our patent systems, let them change over to our system.

I think two things should be noted right away. First, the Commission gave as one of six objectives "to make U. S. patent practice more compatible with that of other major countries, wherever consistent with the objectives of the U. S. patent system." Thus, the idea is to harmonize "wherever consistent" with U. S. objectives.

Second, the changes proposed are to be for the benefit of U. S. people, not for the benefit of foreigners.

Why should we be concerned? It is true less than half of the U. S. originated cases are filed outside the U.S. However, do you realize that in 1965 when U. S. residents filed about 72,000 applications in the U. S. Patent Office, they also filed approximately 118,000 applications outside the United States? That is a lot of applications for people who aren't interested in foreign applications.

Last year, in 1966, U. S. people filed approximately the same number of complete specifications in the United Kingdom alone as did the British people. That is a lot of applications for people who aren't interested.

The United International Bureau for the Protection of Intellectual Property (BIRPI) has reported filing statistics for the year 1965 for 56 other countries besides the United States and the United Kingdom not including the Communist countries. Of these 56, 38 countries reported more applications of U. S. origin than of local origin, and a 39th country said they were about equal. With the United Kingdom this would seem to make 40 out of 57 countries, or 70 percent in which the United States filed more than the local people. That is a lot of applications for people who aren't interested.

One might think that these 40 countries were mostly the little ones of the group with little patent activity. But, if we consider only the 20 with the greatest patent activity, we find the U. S. originated applications exceeded the local ones in nine of the 20 countries, and in a tenth, the United Kingdom, they were about equal in 1966. That is a lot of applications for people who aren't interested.

Further, in this connection, the rate of increase of U. S. filing abroad

is far greater than the rate of increase of U. S. filing at home. For example, let me read you some of the percentage increases in U. S. originated applications filed in 1965 over 1960: Japan, 93 percent; Germany, 52 percent; France, 46 percent; United Kingdom, 51 percent; Canada, 20 percent; Italy, 59 percent; Switzerland, 62 percent; Netherlands, 74 percent; Sweden, 59 percent; Belgium, 95 percent.

In all, the top 20 countries had an increase in U. S. originated cases filed in 1965 over 1960 of about 55 percent, while in the same period the increase in U. S. originated cases filed in the U. S. was only 11 percent. It is therefore evident that there is a very substantial amount of filing by U. S. people outside the United States, and this is increasing at a very rapid rate.

If you or your company or your clients are not interested, maybe you should be. Almost any invention of value in the United States has considerable value in the rest of the world, if properly protected by patents. Are you missing the boat?

In view of these facts, I think the Commission's Report, from an international aspect, indicates an understanding of the real world as it is today, rejecting U. S. isolation in the patent area. It recognizes that the world's patent systems promote the beneficial exchange of products, services and technological information across national boundaries, thereby stimulating inventive activity.

It recognizes that making the world's patent systems more compatible and moving toward the goal of a universal patent system would provide benefits for all inventors and all business, and help to raise the standards of living everywhere, thereby serving our own national interests.

It recognizes that the large filing activity by U. S. people in other countries includes much duplication of effort and, therefore, extra expense in time and money to U. S. patent applicants.

Accordingly, in the broad sense, we find the Commission proposing the goal of a universal patent and recommending pursuit thereof through: (1) international harmonization; (2) the formation of regional patent system groups; and (3) a universal network of mechanized information storage and retrieval systems. While these are not the type of recommendations calling for legislation now, they are most important and seem to meet with general approval of interested parties.

I must admit, however, I occasionally feel that they are approved by my colleagues in the patent profession simply because they sound like unassailable virtues in the category of God, Flag and Mother, al-

though even God and the Flag seem to be collecting a few brickbats these days. Maybe the approval is qualified by "if they do it our way." Then I talk with them, recognize their sincerity, and my faith is restored.

There are, however, several other recommendations of the Commission incorporated in the Patent Reform Act which have some international aspects and are considerably more controversial.

For example, the first-to-file concept, with elimination of the grace period and the possibility of a preliminary application; the extension of prior art to include foreign knowledge, use and sale; filing by either the assignee or the inventor; early publication and the opportunity for the public to cite art.

Also, provisions for standby authority for optional deferred examination; the opportunity for limited cancellation proceedings; term of patent based on filing date; infringement through importation into the United States of a product made abroad by a process patented in the United States.

Of these, I would like to discuss the most controversial; that is the first-to-file concept with elimination of the grace period and the provision of a preliminary application.

Let me emphasize again the international aspect was only one of several factors considered by the Commission in making these recommendations. We have heard much against this proposal. However, in line with our Moderator's questions, particularly as to whether the proposed changes really change the law and practice as greatly as has been indicated, let me raise some points on the other side, and give you some of my own experiences, which I hope will be helpful to you in arriving at the answers.

There are valid arguments on both sides of the questions. I think it is essential that we carefully consider both sides from an unemotional, cold, realistic point of view. I will attempt to present some things which should also be included in your thinking.

As you all know, the United States now follows a so-called first-to-invent philosophy for granting patents with a one-year grace period. As our Moderator pointed out, it is not exactly a first-to-invent system.

Actually, it is presently a first-to-file system with exceptions; the exceptions being that the later filed application can receive the patent, if, but only if, the inventor can prove he conceived the invention first and then reduced it to practice first and the other party cannot establish a first conception coupled with diligence.

There is, unfortunately, a substantial gap here between theory and practice. It might even be called a "credibility gap" because our

practice does not lend much credibility to what an inventor says or writes. It requires "proof" of a nature which necessitates a departure from the way most inventors work. Most inventors have a number of ideas from time to time, only a few of which are real good. At the time of conception the good ones often are not readily distinguishable by him from the poor ones. He does not normally have a tendency to describe all of these in writing and explain them to someone else capable of understanding, who in turn will make a record of it. And when he reduces an idea to practice, and shows it to someone else, there is a substantial likelihood that person would either not understand or not be able to see all the essential parts or not make a record or otherwise fail to do things important to establishing the required "proof".

Then, how many inventors would normally keep a sufficient record of their activities to establish diligence, or are actually diligent in the degree required, or, for that matter, understand what constitutes diligence. Unfortunately, the patent legal meanings of conception, diligence and reduction to practice do not always coincide with the inventor's understanding. I often wonder how many poor, misguided inventors delay filing in reliance on the theory of first-to-invent, where their actual practices and records are completely insufficient to establish their conception of a reduction to practice or diligence.

It is reported that only 1 percent or less of the U. S. applications get into interference and, therefore, the complicated and long-drawn-out practices for handling interferences affect only a few. But this overlooks the fact that because of this system, the inventors of the country must keep records with witnesses, and worry about diligence, for all the other 99 percent as well, and in addition for all the possible inventive ideas which did not ultimately form the basis of an application. No inventor I ever heard of has applications filed on every one of his ideas.

In my company, the inventors have many more ideas than they themselves ultimately submit for consideration for filing, and they submit seven for every one that is filed. If this is typical, you can see that if they did what they should, the U. S. inventors who filed 72,000 applications in 1965 would have kept records for more than seven times 72,000 or more than 500,000 ideas. That is a lot of paper; for what purpose? As possible support for the 700 or so of these applications which will probably get into interference? And with what result?

The large majority of the interferences are won by the applicant who was first to file. I wonder how many interferences are won simply because the other inventor was caught with insufficient evidence to

support his own statements. I venture to guess there were quite a high percentage in this class, and as to these, our first-to-invent system was merely a beautiful theory creating a lot of sound and fury and amounting to nothing.

How fair is all this? How much additional stimulation does this so-called first-to-invent system give to our inventors when it requires them to go through such a mass of additional paper work?

I have heard it said that if the first-to-invent system produces "justice" for only one inventor, it is worth it. But how about producing injustice; injustice to the small inventor who cannot be expected to know all the niceties of interference proofs?

There are thousands of Americans working outside the United States. What about injustice to them? If they make an invention in the United States and happen to know about interferences, they can go back to provable conception dates for first inventorship purposes. But, if the same man happens to make that invention in England, he is limited to his filing date. Justice? We used to rationalize this on the basis of difficulty of taking testimony and establishing proofs, besides which, many years ago many of us just didn't trust foreigners.

I have a daughter who lives in Austin, Texas, at the University of Texas. I can get to England just as quickly and more conveniently than I can get to see my daughter. I can pick up the telephone and converse just as quickly with my co-workers in England as with her.

I can get mail delivered from England just as quickly and often more quickly than from her. Goodness knows what it would be if she lived in the State of Alaska. Yet here is Great Britain, with an outstanding legal history far longer than ours, and we won't let a resident of that country even attempt to establish proof of any acts prior to filing an application. Is that justice? The United States has no monopoly on brains, ingenuity, honesty, integrity, but we often act that way.

Two weeks ago I attended a conference in Frankfurt which was attended by representatives of the major companies in Europe and by leading people in the patent profession. By far the greatest applause in two full days of meetings came in response to statements by Gordon Grant, head of the British Patent Office, when he said, in effect, that there is no part of American practice that is more passionately disliked by Europeans than our first-to-invent and interference system; that because it is so thoroughly hated, it has become a symbol—rightly or wrongly—but, nevertheless, a symbol, and if the United States truly wants to promote wholehearted cooperation in the international patent field it must remove that symbol.

You may ask, a symbol of what? Mr. Grant did not say in his talk, but the audience knew and I knew; a symbol of the United States saying, loudly and clearly, "We don't trust you."

Comments are made about the proposed first-to-file system favoring the large corporations. But who do you think in the present system would most likely have the best records to establish the required proof—the large corporation—which because of their volume can afford to educate their inventors and establish rules and controls over inventors' records and test procedures and provide witnesses; to the small company or so-called small inventor, who makes an invention only once in quite a while and sees his patent attorney at widely spaced intervals and usually after he has already done, or rather failed to do, things which might be important in proving first inventorship?

The proposed first-to-file system is supposed to favor the big corporations because the system will produce a "race to the Patent Office," and the big corporations allegedly will be better able to run that race.

With respect to this aspect, I have one or two comments.

Large corporations are notoriously slow-moving and less able to act quickly than a small company or individual. My company has six good-sized laboratories in six different countries of Europe, all of whom have a first-to-file system, and yet we have not found it necessary, or even desirable to handle our inventions and filing because of this any differently than we do in the United States.

In the six and one-half years in which my responsibilities have included protecting the inventions from these European labs, I have never once run into a situation where anyone—inventor, patent attorney, or anyone else—became concerned about a "race to the Patent Office." In my many, many discussions with patent agents and patent management of all kinds outside the United States, I have heard many complaints, but I have never heard them complain about or raise any criticism about operations under a first-to-file system.

It has been suggested that the "race to the Patent Office" will result in poorly prepared applications and the European prepared applications are pointed out as illustrating this position. Now certainly it is true that the less work that is done, the shorter the time it takes and, usually, the poorer the case. But that is not always so. I have seen some cases which were prepared after quite some months of work, and they were pretty poor. In any event it depends upon the amount of time and effort actually given to preparing the case and not on the date when done.

Nevertheless, I think we also have to consider whether or not the difference in the European and U. S. prepared applications are the

result of differences in the ideas and standards of what constitute a well prepared application rather than with the first-to-file system. Here you might wish to know, most Europeans think U. S. applications are very poorly prepared. I wonder if that is because of our first-to-invent system.

I have heard statements to the effect that the first-to-invent philosophy is a basic part of our patent system, and to go to a first-to-file system is to depart from that which made our industrialization so successful. While our patent system has been of great assistance in our country's development, I think attributing it to the first-to-invent system is somewhat of an exaggeration. Japan in recent years has had a phenomenal growth at a rate far exceeding ours. Is this because of their first-to-file system? Is our industrial development due to, or in spite of, our first-to-invent system?

Now a part of our present system, which goes right along with our first-to-invent philosophy, is the grace period. With a first-to-file system, the grace period cannot be used. Our grace period does not give the inventor any priority rights, but it does give him a one year period following publishing of his invention to file his U. S. application without the publication being a bar. There is no question this gives a degree of leeway insofar as U. S. practice is concerned, which is welcomed by both inventors and patent attorneys. But we must also realize this grace period can be, and often is, a treacherous snare and illusion.

The average inventor or businessman naturally tends to believe that if he can get a U. S. patent he will be able to get a patent in any other country. But this isn't so. If his invention is published or if someone else filed before he files his first application, he is barred from getting a patent in many countries of the world.

Mr. Walton, this morning, praised our present system for giving time. But does it really? Mr. Walton said he always filed abroad. He had 400 foreign patents. What happens to his foreign patents if, while he is taking his time today, someone else, in the U. S. or abroad, files? Maybe Mr. Walton has just been lucky.

Keeping in mind the large and rapidly increasing number of U. S. applications already being filed outside the United States, one can readily see how an inventor can be lead right down the primrose path in reliance on the U. S. grace period to find he has lost out on foreign protection which might double the value of his invention.

I think a patent attorney today has an unusually strong obligation to advise his clients of the possibilities of foreign protection and the necessity to avoid such things as publication before filing to leave

himself the option of foreign filing if he desires. As a result, all who are even considering foreign filing must operate in effect without the grace period.

Many scientists and people in the academic world in the United States have a strong desire to publish their ideas. Presently, they do so in the grace period and lose their foreign rights to patent protection. The Commission attempted to provide a convenient means for them to do so without losing either their U. S. rights under a first-to-file system or their foreign rights to patent protection. To this end a preliminary application was recommended.

I personally don't care for this idea, and we have had no trouble outside the United States on this score. The United Kingdom has a similar provisional application, but we have used it only twice in ten years, and even then, wondered why we bothered.

However, I must say I do not understand many of the arguments advanced against this recommendation. Those who argue for the first-to-invent system, requiring extensive record-keeping on the part of the inventors with the accompanying difficulties of proofs and the necessity of complete descriptions, not only in written records but with witnesses, also argue against the preliminary application on the ground it will require too much writing and will have to be prepared by skilled attorneys to carry the date back and will add litigation-type difficulties.

It seems to me that no more care needs to be exercised in writing a preliminary application than in recording a description for use in a future interference. Or if for purposes of scientific meetings, the difference is in a preliminary application, you don't have to worry about proving a date or of having competent witnesses or of exercising diligence and being able to prove it. It also seems to me the preliminary application will require study no more often than an interference would occur.

Now we have a first-to-invent system with grace period which has faults. It requires excessive record-keeping, witnesses, worry about diligence, proofs, et cetera. It can give unknowing inventors a false sense of security. It produces some injustices. It has little effect on the ownership of patents. It is expensive and time-consuming. It can lead an unsuspecting inventor down the primrose path in reliance on the grace period.

On the other hand, we have the proposed first-to-file system with preliminary application, which is not ideal. But it eliminates the record-keeping, witnesses and diligence questions. It is relatively simple for an inventor to understand, so he will not be misled.

There is less chance of an unsuspecting inventor losing his option to obtain foreign patents without even considering the question. It provides, in effect, a grace period through the filing of a preliminary application of the same nature as the desired publication.

So, I too, ask you; look at this coldly, realistically, practically. Is there really much difference, or are we letting ourselves become involved in theoretical abstractions. Let us remember too the flaws, as well as the advantages, in our present system.

Although we must look to the true merits of the situation, I think too we must face up to the real world; to the fact that the world is smaller; that all the world is our market; that international cooperation is essential for the future of patents; and that the rest of the world passionately hates our first-to-invent system and views it like another version of the ugly American.

In this light let us take another look, make another effort, come up with constructive suggestions.

Thank you. (Applause)

MODERATOR FROST: Our next speaker, John C. Green is Project Leader on the Research Staff of The PTC Research Institute and formerly Director of Analysis and Research, Office of Emergency Planning, Executive Office of the President. John:

JOHN C. GREEN

This gives me a lead into the topic that Lou Harris asked me to report on, which is what the Institute proposes to do about innovation and the impact of innovation in the next few months as a result of the Commission's study.

Mr. Harris has decided to marshal his intellectual and physical resources and focus them on the issues which the Commission has raised. He sees the patent profession and legal profession is well represented already. Therefore he will emphasize research administrators, inventors and management personnel.

The Congress has heard, or is hearing from attorneys and the Executive Office knows how they feel. However the competent inventor, a cross section of recent patentees, the executive who spends money on patents, the research administrator, the foreign authorities who see the trends in invention and patents in their own systems—these are the sectors the Institute will probe. We have heard very

recently that the Swiss are considering a limited search for textiles and watches, and the French, I understand, are concerned with examination of drugs now—these are changes in their patent system somewhat moving our way.

Lou is considering a coordinated, integrated research project which incorporates his skills, those of Dr. Sanders, Dr. Siegel and Gerry Weiser, and some others in the group. The joint attack on this problem would last over perhaps 12 months.

The idea is to do the usual research approach. Start with the literature, follow up with questionnaires and selected interviews. Then analyze what you find and attempt to distill the essence of this information and uncover new insights in the impact of these matters on the various sequences of innovation.

Now, being rather cynical—or perhaps anticipating a question—is this effort worthwhile when there is legislation before the Congress and we will be operating after the fact. There are two answers. One—and here I will stick my neck out—I do not think that specific legislation is going to pass. I honestly do not believe the Congress will enact that legislation this Session. Congress did not move fast on copyright legislation. They weigh the various factors, and enough genuine questions have been asked that I do not believe they are going to move precipitously.

Second, there are a number of genuine issues that have been raised here and there are legitimate pros and cons. It's an area where we have a lot of opinion and very little factual information.

The Institute was set up to do research in this area, and it would be derelict if it did not do it, whether there was legislation pending or not.

That is the essence of what I have to say. (Applause)

MODERATOR FROST: Thank you very much, John.

I neglected to mention that we hope to get a good selection of questions here. I hope everybody is putting down their questions and planning to send them up to us. I hope in the questions we have some that will point up some of the positive side of this report and proposed legislation, not because it is all positive, but rather because we do want a representative display of views here.

Our next speaker is Dr. Barkev Sanders. Dr. Sanders has always struck me, certainly in recent years, as the foremost statistician in the patent system.

Dr. Sanders is now among other things the consultant to the Graduate School of Public Health, University of Pittsburgh.

Dr. Sanders.

BARKEV S. SANDERS

I shall attempt to speak on some personal observations on the Report of the President's Commission on the Patent System.

What facts and what guidelines the Commission used as the basis of its recommendations are not known to this observer. It is understood that there is a body of data as a backdrop for the Commission's Report and recommendations, but this has not been made public.

From the introduction to the Report one is left with the impression that the only justification that the Commission could find for its work in changing the patent practice was that although the law has been amended on numerous occasions—and rewritten twice since 1836—no basic changes have been made in its general character in the succeeding 130 years.

To this observer this seems hardly a sufficient basis for drastically modifying the working pattern of a functioning institution under which as we shall demonstrate the quality of patented inventions have improved progressively.

The Commission asserts that its recommendations if enacted into law will attain the following objectives:

- (1) Raise the quality and reliability of the U. S. patent;
- (2) Shorten the period of pendency of a patent application from filing to final disposition by the Patent Office;
- (3) Accelerate the public disclosure of technological advances;
- (4) Reduce the expense of obtaining and litigating a patent;
- (5) Make U. S. patent practice more compatible with that of other major countries, wherever consistent with the objectives of the U. S. patent system;
- (6) Prepare the patent system to cope with the exploding technology foreseeable in the decades ahead.

This observer has serious doubts whether the recommendations of the Commission, if carried out, will attain or even move in the direction of some of these stated objectives.

For instance, let us consider the first objective. To raise the quality and reliability of the U. S. patent.

First we observe that even though the Commission makes broad general recommendations about the quality of patents, it nowhere indicates what it means by quality. I am told on good authority that this quality refers to the quality of administrative process in granting or denying a patent.

It would seem to me if the Commission is attempting to improve the patent system it cannot be indifferent to the quality of inventions that flow from the patent system. And ultimately there may be no effective way to appraise the quality of the patent processes except in terms of the fruit that it bears, that is, the quality and legal validity of the patented inventions that flow from it.

It should be pointed out that the studies of The Patent, Trademark, and Copyright Research Institute have demonstrated the progressive upgrading of patented inventions by the United States Patent Office,¹ in spite of the antiquity of its laws stressed by the Commission as the rationale for its recommended changes.

A different indication of this upgrading of U. S. patents is the general upward trend in the proportion of American patents that are also patented abroad. In general the inventions which besides being patented in the United States are patented abroad are of higher quality.² Therefore, other things being equal, a progressive increase in the proportion of American patents that are patented abroad is a measure of increasing quality in the American patents issued. There is every indication that there has been such an increase persistently. This is demonstrated in Table A, which was distributed to you.

Table A (appended) shows three samples of assigned American patents issued in specific years on which information was obtained

¹ Sanders, B. S., "The Upgrading of Patented Inventions and Their Use Here and Abroad," *PTC J. Res. & Ed.*, (*IDEA*), Vol. 7, No. 1 (Spring 1963), pp. 45-83; and Vol. 7, No. 2, (Summer 1963), pp. 185-228; see especially pp. 222-228.

———, "Trends in Inventions Here and Abroad," *PTC J. Res. & Ed.*, (*IDEA*), Vol. 6 (Conference No. 1962), pp. 32-35, 147-153.

———, "Trends in Invention: U.S. and Abroad," *PTC J. Res. & Ed.*, (*IDEA*), Vol. 7 (Conference No. 1963), pp. 85-88.

———, "Comment," *PTC J. Res. & Ed.*, (*IDEA*), Vol. 5, No. 4 (Winter 1961-62), pp. 361-368.

² Sanders, B. S., "American Inventiveness v. Foreign Inventiveness," *PTC J. Res. & Ed.*, (*IDEA*), Vol. 5, No. 2 (Summer 1961), pp. 114-129, see especially Table II, p. 125.

———, "The Upgrading of Patented Inventions and Their Use Here and Abroad," (Continuation) *PTC J. Res. & Ed.*, (*IDEA*), Vol. 7, No. 2 (Summer 1963), pp. 218-220.

whether the same patented invention was patented abroad and the number of different countries in which it was patented. It is seen that in 1938 that something like 73 percent of American assigned patents issued that year, on which this information was obtained, were not patented in any other country. Among assigned patents issued in 1948 the percentage of American patents not patented abroad was 59, and in 1952 it was less than 56.

Current figures, where they are available, would probably show that less than 50 percent of assigned patents were patented in the United States only. This may be inferred from Chart I (appended) made available by the U. S. Patent Office.

The reference to Table A is for the three years indicating the progressive increase in the proportion of patents.

Chart I demonstrates the progressive increase overtime in the proportion of American patent applications that are also filed abroad.

Another measure of this upward trend in the quality of patented inventions is the number of foreign patents per American patent. This average number was 0.44 for assigned patents issued in 1938; that is, on the average, for every 100 assigned American patents there were 44 foreign patents issued on some of these inventions. In 1948 this number was 1.15 per one American patent; that is, on the average, for every 100 assigned American patents there were 115 foreign patents issued on some of the same inventions. In 1952 the average number of foreign patents given to Americans per assigned American patent was 1.38; that is, on the average, for each 100 assigned American patents there were 138 foreign patents. Projecting these trend lines would suggest perhaps 250 foreign patents per 100 assigned American patents today.

This inference is supported by the fact that on the basis of Chart I, in 1952, for each 100 American filings of assigned or unassigned patents there were 55 foreign filings in 15 countries with largest American filings. In 1965 this ratio had gone from 100:55 to 100:131, more than a twofold increase.

That the number of countries in which a specific invention is patented is a pretty good index of the quality of patents is brought out in Table B, where we indicate the association between patent utilization index with the number of countries in which the same invention is patented.

It is seen in Table B (appended) that in general the proportion of assigned patented inventions reported put to commercial use is the lowest for those that are patented in the United States only, that in

general this proportion rises as the number of countries in which the American patented invention is patented increases.

Thus, for the three years combined, the percentage of assigned patented inventions reported in commercial use is 40 percent for U. S. patents that are not patented anywhere else. For those patented in one other country this utilization ratio rises to 54. For those patented in two other countries it rises to two-thirds, and finally for inventions that are patented in 11 or more foreign countries it is 75.0. In other words, patenting abroad and the number of foreign patents per American patentee, per se, are indices of the quality of patents, and on the basis of these there has been a progressive upgrading of American patented inventions.

In passing I should mention that a more sensitive index of quality would be the American patents patented in countries which require payment of annual maintenance fees in terms of the number of years that such American patents are kept in force through the payment of required fees, such as in Germany. Work is going on at this time by the Institute toward the development and calibration of such an index.

Turning to the progressive upgrading of American patented inventions, what accounts for this? Definitive work has not been done to answer the question with assurance at this time. The progressive shift from independent inventor to employee inventor is perhaps one contributory factor; shift from empiricism, trial and error, to the application of basic scientific principles is another. The escalating costs involved in taking out a patent including the search and the fees for patent attorneys itself must exercise considerable selective influence on the number and types of inventions that are patented. A very important selective element, we believe, is the opportunity given under the present patent law for a one-year grace period, which the Commission's recommendation will take away.

That is, as far as assigned patented inventions are concerned there must be a tremendous selection, in view of the fact that according to assignees, about 40 percent of all assigned patented inventions put to commercial use the inception of such use precedes the date on which a patent application was filed. This implies that a large number of assigned inventions are first tried in the marketplace and only those inventions are patented that prove commercially viable. The distribution of assigned patented inventions put to commercial use in relation to the date on which a patent application was made and the date on which the patent was issued is shown in Table C (appended).

Table C gives the statistics on 245 assigned patents for which the

date on which commercial use began was reported. In 96 instances, 39.2 percent, the date on which the invention was put to use preceded the date on which an application for a patent was filed. This would suggest that in an average year there may be anywhere between 30 and 60 thousand patentable inventions for which under present provisions no application is filed; however, under the provisions recommended by the Commission, patent application would be filed because there will be no market test to screen them out.

Under the provisions recommended by the Commission, therefore, there will be a marked increase in patent applications and a parallel decline in the quality of inventions on which patent applications are filed. The move would be in the opposite direction from the stated objectives of the Commission.

The above conclusion is strengthened and compounded by another type of information also derived from the Patent Utilization Study. Inventors of both assigned and unassigned patents were asked if they had had patentable inventions for which no patent application was ever filed.

Of the 637 inventors of assigned patents who responded to this question 449, or 70.5 percent answered "yes." It was indicated that many had more than one and some very many patentable inventions for which no patent application was ever filed for one reason or other.

The findings in more detail are summarized in Table D (appended). Similarly for 193 inventors of unassigned patents who responded to the inquiry, 131, or about 67.9 percent, replied "yes." These replies would indicate a large pool of patentable inventions for which, under the present pressures for patenting, no patent applications are filed.

It is believed the breathing time made available by the so-called grace period in large part is responsible for this. Under the modified rules recommended by the Commission the tendency would be to promptly file a preliminary application and then ponder what could be done with the invention.

Again we are inclined to believe that, on the average, inventions for which no application is filed now are of lower quality in comparison to those for which patent applications are filed. Under the new patenting provisions (Recommendation II) it is believed very few patentable inventions will be held without filing at least a preliminary application.

The reasons given by inventors why no patent applications were filed for some of their patentable inventions are summarized in Table E (appended) for inventors of assigned and unassigned patents,

respectively, for the combined three-year period as well as for each year.

Time does not permit this observer to go into other phases of the Commission's recommendations but one. That is the 20-year period. The recommendation is made for the change because it is said, measuring the patent term from the time when the patent is issued encourages deliberate delays in the prosecution of application.

From what Mr. Walton said, perhaps this is a common practice now. However, looking at it merely from the standpoint of whether there is a selective delay, I found no evidence for such selective delay. That is, for instance, the patents for which application was filed after the use, there would be every motivation to delay because every delay would mean extending the period of protection. The average duration of pendency for such patents was no different from that of other patents.³

This lack of an intentional prolongation of the pending time of patents is also corroborated by Table F (appended) in which the mean duration of time between the date of application and the date of issue for assigned and unassigned patents is shown for groups of patents according to the utilization status of the patented invention as reported by the assignee, and for the unassigned patents by the inventor, for the three years combined, and for each year.

From these few empirical findings gained from the Patent Utilization Study we believe that Recommendations I and II will greatly increase, perhaps double or even treble, the present number of patent applications. This increase would markedly lower the average quality of inventions for which patent applications will be filed under the new provisions. The increase would also mean higher demands for professional services pushing up further the costs of patenting and lowering the quality of work on each application. The very emphasis put on being the first to apply will also militate against high-grade applications prepared with due deliberation and care. This would also tend to increase the chances for eventual litigation and costs of patenting and enforcement of patent rights.

It would seem in terms of quality of patents, their number and the costs, the effect of the recommendations of the Commission not only would not fulfill most of their stated objectives but would have just the opposite effect in many instances.

In changing the term of patent, the stated reason for it does not seem to have any foundation in fact. It is clear, therefore, that in areas

³ Sanders, B. S., "Speedy Entry of Patented Inventions into Commercial Use," *PTC J. Res. & Ed. (IDEA)*, Vol. 6, No. 1 (Spring 1962), p. 87; also Table 8, p. 107.

for which we have factual information to appraise the merits of the Commission's recommendations we find no justification for the Commission's claims that changes recommended will accomplish the stated ends; in areas for which there is no tested experience we would be adopting the Commission's recommendations on faith—which is hardly a sound course of action. Action without clear vision—which we have shown the Commission did not have—is like jumping out of the window. This is hardly warranted except when there is fire inside—and, as we have shown, there is nothing radically wrong with the American patent system to warrant such precipitant action.

What is called for is a more deliberate study to gain a fuller understanding of our patent system before we start tinkering with it haphazardly just because it is old in terms of the Commission's reference to time.

Thank you. (Applause)

APPENDIX

TABLE A

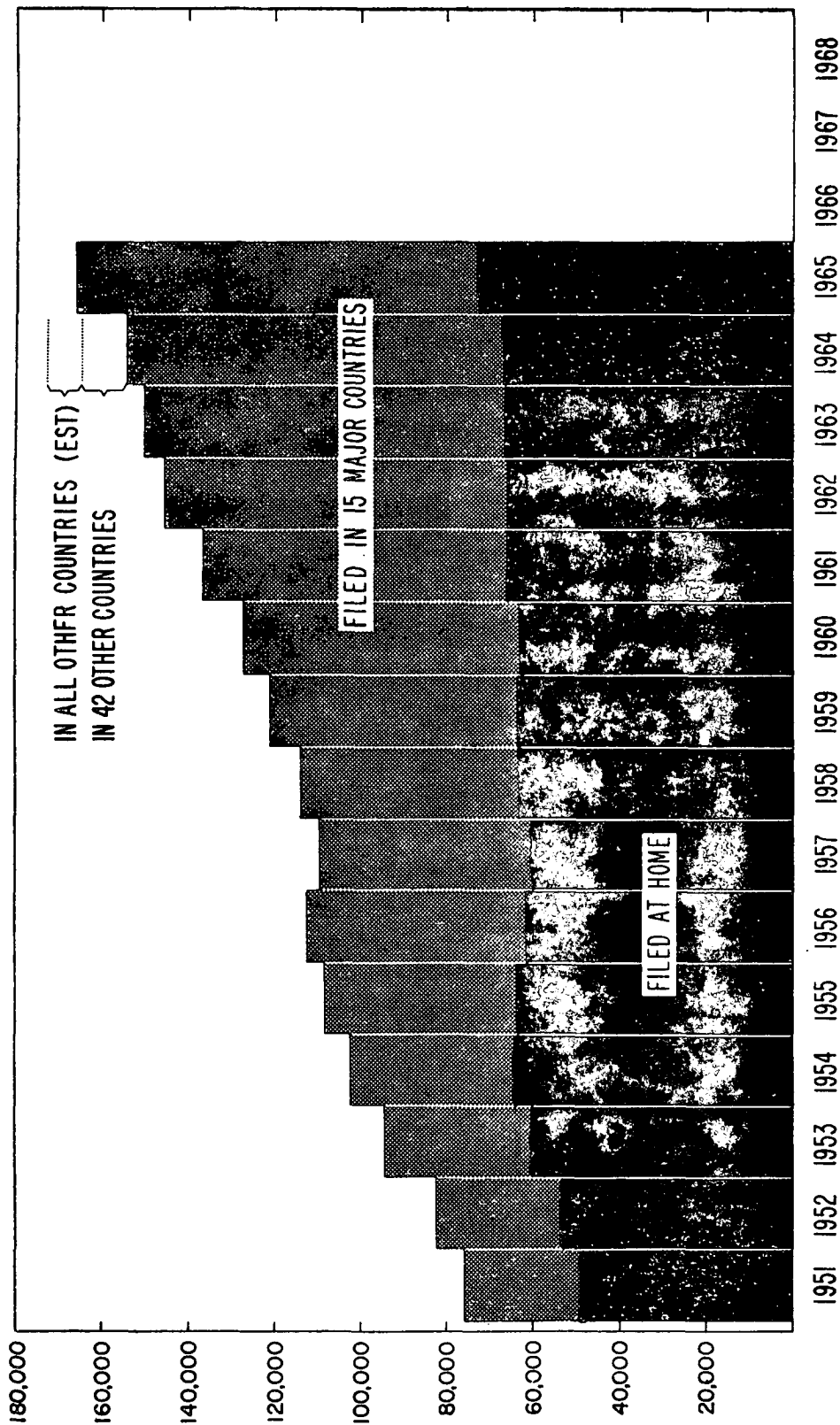
DISTRIBUTION AND SUMMARY STATISTICS OF ASSIGNED U. S. PATENTS ISSUED IN SELECTED YEARS ACCORDING TO WHETHER THE SAME INVENTION WAS PATENTED IN ONE OR MORE FOREIGN COUNTRIES

Number of Foreign Patents	1938		1948		1952	
	U. S. Patents	U. S. Foreign Patents	U. S. Patents	U. S. Foreign Patents	U. S. Patents	U. S. Foreign Patents
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	94	—	69	—	106	—
1	18	18	17	17	34	34
2	9	18	8	16	16	32
3	4	12	6	18	8	24
4	1	4	6	24	6	24
5	1	5	1	5	8	40
6	—	—	3	18	2	12
7	—	—	1	7	1	7
8	—	—	1	8	1	8
9	—	—	—	—	1	9
10	—	—	1	10	1	10
11	—	—	1	11	—	—
12	—	—	—	—	1	12
20	—	—	—	—	1	20
30	—	—	—	—	1	30
Have foreign patent(s); no. not known	—	—	1	—	—	—
Not known if foreign patents	2	—	2	—	3	—
Total	129	57	117	134	190	262
Percent with no foreign patents	72.9		59.0		55.8	
Average no. of foreign patents per U. S. patent		0.44		1.15		1.38

Source: Postal card returns in 1962 for the Patent Utilization Study.

CHART I

PATENT APPLICATIONS FILED BY U.S. RESIDENTS



Source: From the United States Patent Office.

TABLE B

(CORRELATION BETWEEN COMMERCIAL USE OF ASSIGNED U. S. PATENTED INVENTIONS AND THE LIKELIHOOD OF THEIR BEING PATENTED IN ONE OR MORE FOREIGN COUNTRIES—FOR EACH YEAR AND FOR THE THREE YEARS COMBINED)¹

No. form pat.	All Three Years				1938				1948				1952			
	Total	Not used	Used		Total	Not used	Used		Total	Not used	Used		Total	Not used	Used	
			No.	Per cent			No.	Per cent			No.	Per cent			No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
0	268	161	107	39.9	94	56	38	40.4	68	42	26	38.2	106	63	43	40.6
1	69	32	37	53.6	18	10	8	44.4	17	10	7	41.2	34	12	22	64.7
2	32	10	22	68.8	8	3	5	62.5	8	3	5	62.5	16	4	12	75.0
3	18	6	12	66.7	4	1	3	75.0	6	4	2	33.3	8	1	7	87.5
4-5	23	9	14	60.9	2	1	1	50.0	7	4	3	42.9	14	4	10	71.4
6-10	12	4	8	66.7	—	—	—	—	6	2	4	66.7	6	2	4	66.7
11-30	4	1	3	75.0	—	—	—	—	1	—	1	100.0	3	1	2	66.7
Total	426	223	203	47.7	126	71	55	43.7	113	65	48	42.5	187	87	100	53.5
Percentages	100.0	52.3	47.7	—	100.0	56.3	43.7	—	100.0	57.5	42.5	—	100.0	46.5	53.5	—

Source: Postal card returns in 1962 for the Patent Utilization Study.

¹ Limited to patents with known utilization status and known status as to number of foreign patents.

TABLE C

NUMBER AND PERCENTAGE DISTRIBUTION OF ASSIGNED U. S. PATENTS REPORTED IN COMMERCIAL USE FOR WHICH THE DATE WHEN USE BEGAN WAS REPORTED—RELATING THIS DATE TO THE DATE WHEN PATENT APPLICATION WAS MADE AND THE DATE ON WHICH THE PATENT WAS ISSUED—FOR EACH YEAR AND FOR THE THREE YEARS COMBINED—BASED ON ASSIGNEE REPLIES

Time When Use Began	Year of Issue							
	Combined		1938		1948		1952	
	No.	Per- cent	No.	Per- cent	No.	Per- cent	No.	Per- cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total	245	100.0	76	100.0	60	100.0	109	100.0
Before filing patent appli- cation	96	39.2	27	35.5	25	41.7	44	40.4
After application but before issue	120	49.0	38	50.0	29	48.3	53	48.6
After issue	29	11.8	11	14.5	6	10.0	12	11.0

Source: Assignee questionnaires with adequate replies.

TABLE D

FREQUENCY AND PERCENTAGE OF RESPONSES BY INVENTORS OF ASSIGNED AND UNASSIGNED PATENTS IN THE PATENT UTILIZATION STUDY AS TO WHETHER THE INVENTOR HAD HAD PATENTABLE INVENTIONS WHICH HAD NOT BEEN PATENTED—FOR EACH YEAR AND FOR THE THREE YEARS COMBINED—BASED ON INVENTOR QUESTIONNAIRES¹

Inventors of Assigned Patents																	Inventors of Unassigned Patents															
																	Combined		1938		1948		1952		Combined		1938		1948		1952	
No.		Percent		No.		Percent		No.		Percent		No.		Percent		No.		Percent		No.		Percent										
(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)		(16)		(17)		
Yes		449	65.1	108	67.1	102	58.9	239	67.1	131	64.8	23	74.2	34	69.4	74	60.7															
No		188	27.2	37	23.0	56	32.4	95	26.7	62	30.7	6	19.4	15	30.6	41	33.6															
Not answered		53	7.7	16	9.9	15	8.7	22	6.2	9	4.5	2	6.4	0	0.0	7	5.7															
Total		690	100.0	161	100.0	173	100.0	356	100.0	202	100.0	23	100.0	49	100.0	122	100.0															

Source: Responses to Question 19 of Inventor Questionnaire for the Patent Utilization Study.

¹ "Yes" may mean any number of patents on which for one reason or other no patent application was filed.

TABLE E

FREQUENCIES AND PERCENTAGE OF RESPONSES OF INVENTORS AS TO WHY ONE OR MORE OF THEIR PATENTABLE INVENTIONS WERE NOT PATENTED— FOR EACH YEAR AND FOR THE THREE YEARS COMBINED

Reasons	Inventors of Assigned Patents								Inventors of Unassigned Patents							
	Combined		1938		1948		1952		Combined		1938		1948		1952	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Not economically feasible	116	24.6	34	29.1	23	20.9	59	24.1	17	13.1	7	30.4	3	9.7	7	9.2
Doubtful useful value	86	18.2	20	17.1	22	20.0	44	18.0	22	16.9	3	13.0	11	35.5	8	10.5
Lack of capital	58	12.3	12	10.3	14	12.7	32	13.1	49	37.7	5	21.7	10	32.3	34	44.7
Company policy	41	8.7	9	7.7	10	9.1	22	9.0	0	0.0	0	0.0	0	0.0	0	0.0
Kept secret	35	7.4	7	6.0	11	10.0	17	6.9	0	0.0	0	0.0	0	0.0	0	0.0
Too busy—no time	29	6.1	4	3.4	10	9.1	15	6.1	5	3.8	1	4.3	2	6.5	2	2.6
Already patented	23	4.9	10	8.5	5	4.5	8	3.3	5	3.8	0	0.0	0	0.0	5	6.6
Not completed	11	2.3	2	1.7	0	0.0	9	3.7	5	3.8	0	0.0	0	0.0	5	6.6
Too much "red tape"	12	2.5	4	3.4	1	0.9	7	2.9	2	1.5	0	0.0	0	0.0	2	2.6
Did not realize importance	13	2.8	0	0.0	4	3.6	9	3.7	0	0.0	0	0.0	0	0.0	0	0.0
Idea stolen	5	1.1	3	2.6	0	0.0	2	0.8	4	3.1	0	0.0	1	3.2	3	3.9
Application rejected	4	0.8	0	0.0	2	1.8	2	0.8	3	2.3	1	4.3	0	0.0	2	2.6
Legal time lapse	3	0.6	3	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Traded information	1	0.2	0	0.0	0	0.0	1	0.4	1	0.8	1	4.3	0	0.0	0	0.0
Other reasons	8	1.7	1	0.8	2	1.8	5	2.0	7	5.4	2	8.7	0	0.0	5	6.6
No reason given	27	5.7	8	6.8	6	5.5	13	5.3	10	7.7	3	13.0	4	12.9	3	3.9
Total	472	100.0	117	100.0	110	100.0	245	100.0	130	100.0	23	100.0	31	100.0	76	100.0

Source: Responses to Question 19 of Inventor Questionnaire for the Patent Utilization Study.

TABLE F

MEAN DURATION IN MONTHS BETWEEN THE DATE OF APPLICATION AND THE DATE OF ISSUE OF ASSIGNED AND UNASSIGNED PATENTS RELATED TO UTILIZATION STATUS REPORTED BY THE ASSIGNEE FOR ASSIGNED PATENTS AND BY THE INVENTOR FOR THE UNASSIGNED—FOR THE THREE YEARS COMBINED AND EACH YEAR SEPARATELY

Assigned Patents (from assignee replies)												
Utilization Status	Combined			1938			1948			1952		
	No. of cases	Mean	S.D.	No. of cases	Mean	S.D.	No. of cases	Mean	S.D.	No. of cases	Mean	S.D.
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)												
Presently in use	170	39.2	21.54	53	31.3	20.17	40	44.6	19.79	77	41.9	21.81
Past use	110	43.2	21.71	37	42.5	25.78	31	41.0	12.96	40	47.6	20.70
Possible future use	48	44.6	21.83	4	27.3	10.52	15	46.3	27.76	29	46.2	18.18
No foreseeable use	261	41.8	18.86	91	32.6	15.63	73	41.9	15.38	97	50.4	19.92
No answer & unknown	3	43.2	19.30	1	35.0	0.00	1	25.0	0.00	1	70.0	0.00
Total	592	41.6	20.43	186	34.1	19.71	160	42.7	17.75	244	46.9	20.79

Replies of Inventors of Unassigned Patents												
Utilization Status	Combined			1938			1948			1952		
	No. of cases	Mean	S.D.	No. of cases	Mean	S.D.	No. of cases	Mean	S.D.	No. of cases	Mean	S.D.
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)												
Presently in use	62	32.7	18.18	4	14.5	4.97	21	26.1	12.70	37	38.5	19.10
Past use	21	35.3	24.34	6	29.7	15.31	4	58.3	38.13	11	30.0	14.47
Possible future use	14	31.2	13.57	0	—	—	2	25.0	3.00	12	32.3	14.34
No foreseeable use	17	34.3	15.91	14	25.7	15.54	16	36.2	13.52	41	36.5	15.89
No answer & unknown	33	36.3	16.86	7	27.7	15.36	6	36.8	17.60	20	39.2	16.10
Total	201	34.0	17.74	31	25.5	15.20	49	33.3	19.29	121	35.5	16.96

Source: Assignee and Inventor Questionnaires from the Patent Utilization Study.

MODERATOR FROST: It gives me pleasure to introduce our last participant, Mr. Gerard J. Weiser of McClure and Weiser.

Mr. Weiser.

GERARD J. WEISER

The substance of my remarks has been very ably pre-empted by the prior speakers.

I stand here, however, as a member of the Research Staff of the Institute and not as an advocate of the positions either for or against the propositions of the bill. In five minutes I would like to submit to you a few additional remarks to those of John Green regarding what we are planning to do in the next few months.

The research project, the aspect with which I am concerned, relates to the international aspect only. Will the proposed legislation meet the United States' challenge? We propose to examine critically the basic proposition which permeates the bill, namely, that there is a need for reform of the U. S. law towards harmonization with foreign law, and if such a harmonization were carried through we propose to ask ourselves whether this step would serve the interests of the United States as a whole.

We tend to put this problem in terms of a United States test, rather than as I heard submitted today, whether or not harmonization is meeting an international need. I submit that if harmonization meets the United States' needs, it should also benefit indirectly the international industrial property community.

We propose, therefore, to ask a few basic questions, such as what is the foreign law with which we are attempting to harmonize? Are we attempting to look at the foreign law as it is, in a static way, or rather, what evolution has the foreign law undergone in the recent five or ten years? What is the experience with the existing law? And what is the need and the reason for reform abroad? In gathering this data, we plan to ask ourselves whether the reasons for the changes in the provisions which we seek to harmonize are really pertinent when critically examined in view of United States' aims.

It is significant at this moment to note that important changes have and are taking place abroad. As we seek to harmonize, we cannot at

this time ignore the question: with what are we harmonizing—that which was or that which will be.

It is also significant to note that in this change recently—whether you consider this Scandinavian proposed law, the European Common Market law, the Dutch or Swiss laws, or the French proposed bill—that very significant changes have taken place over these years and more significantly that many of these changes have been in the direction of the United States existing law.

The question I submit to you here which has not been raised yet today is, are we moving into a direction or towards a foreign law which may not be there any more because it has evolved, while the foreign law is moving towards our present law. Certainly, we would not want the two laws to cross in the dark. You cannot ignore the change in European law towards adopting many of the aspects of the United States law. A few illustrations can be mentioned: Product claims are being proposed in Germany today, various forms of examinations are being introduced, and France is considering replacing the resumé by claims.

In contrast you may note the greater difficulty in obtaining product claims in the United States and attempts by the Patent Office and the courts to often limit our invention to the process claims. Any serious consideration of harmonization of the U.S. law with foreign laws cannot ignore the trend of the foreign law to change.

In conclusion, therefore, we hope in three or four months to be able to report to you, by way of publication, and to submit a critical examination of the very basic reason advanced in the proposed law: namely, the necessity and the validity of harmonizing our present law with the foreign law. (Applause)

Panel Discussion and Question Period

MODERATOR FROST: This brings us to the question part of the program.

Actually, we are going to have a few variations in the formal question technique, but I think just to get things moving, we will start out with a good succinct, quite clear question. It is addressed to Mr. Shipman. It reads this way:

"Do you or do you not support the first-to-file system for the United States? 'Yes' or 'no'?"

MR. SHIPMAN: Yes, sir, with reservations.

Horace Cooke has an item he has grandfather rights to. I think this would be an appropriate time for Horace to mention this matter.

MR. COOKE: I am not talking as a representative of the Institute nor of any of my past clients. I am in a situation of the old tom cat whose owner had to take care of him because he was causing so much trouble. I am just consulting.

In trying to analyze in my own mind the effect of the lack of the grace period in the first figure system, I thought I should go back and look at some patents I had taken out myself and what happened to them, or what would have happened to them.

So I picked a few and I eliminated all those that have not expired and I finally came up with a list of which I was perhaps particularly proud, because they were all patents that somebody used, viable commercial inventions. All of them went into very extensive commercial use, were very profitable, and I do not think I would be far off to say, in addition to the money they paid to their owners as savings operations, that the royalty returns were probably an aggregate of around \$20 million.

Four of these patents were significantly important in the war effort. One was involved in litigation. It was held valid. Five of them were in interferences and in two or three we were the junior party. They cover a wide range of inventions. One was a gas purification process. Three were oil refining processes. One was the airborne magnetometer, not only useful in prospecting for oil and other minerals, but as an antisubmarine weapon.

Five of these were developed in actual refining and/or field production operations. They were born there, born in the middle of a refinery while the refinery was running commercially, or in a well, and I might add, that there were a good many people around, representatives of service companies, experts from advisory companies, and in some cases they were created by us in plants operated by licensees under earlier patents of which these were improvements.

Three of them, for reasons connected with the war effort, had immediately to be disclosed to others, and I might add, while they were all later placed under secrecy, that came quite a little later. Before the secrecy orders were issued, there were a great many people who knew about them directly, and probably a great many other people had been told about them and had seen them. If that is not a tangible way to disclose an invention, I do not know what is. I might

add that in one case one of the people who heard about it filed and he was the first to file, but we disposed of that one.

I had to come to the conclusion that there was a very serious doubt that any of these eight cases could have been validly patented if S. 1042 had been the law at the time. The time was gone. The time went almost the moment the invention was born. That is the end of that story.

MODERATOR FROST: Thank you very much, Horace.

I am going to exercise the privilege of the Chair here just a moment and pull together in a little different form what amounts to a condensation of several questions. Here is how I have reframed it:

I think this is addressed to Joe Jackson more than to anyone else. As I say, this is not any specific question but it is an effort to pull a group together. It reads something like this. This is an imaginary situation:

"I recently took testimony in an interference. It involved alleged acts of an invention of 15 years ago. The claims were copied from a patent that will expire in five years. If the applicant prevails in this interference his patent will expire perhaps 12 years after the patent already issued will expire."

Can you defend this sort of nonsense?

MR. JACKSON: Actually, I would not at all.

The 20-year provision will eliminate this. There is a need of that. I did not say anything derogatory about the 20-year provision. I am in favor of it strongly.

MODERATOR FROST: Harry Goldsmith has a comment to make.

MR. GOLDSMITH: My answer would be "yes" to a first-to-file system if this question were asked of me, particularly one that included a prior-user provision and a grace period for disclosures by or derived from the applicant.

I am reminded in getting up to speak here, of what we have in the sales training office of my company. It is a quotation from Ben Johnson which reads, "Nothing will ever be attempted if all possible objections must first be overcome."

In this connection I think too, we may look at two other quotations which I think are pertinent. One from Abraham Lincoln, who was the only patentee President but whose patented invention did not prove commercially successful. He said: "The patent system added the fuel of interest to the fire of genius." It is chiseled in stone over one of the entrances to the Patent Office.

The second quotation which is also chiseled in stone over an adjacent entrance to the Patent Office is one from Thomas Jefferson, who was the first "Commissioner of Patents." He said, "Cultivate

peace and commerce with all." I think this is one of the basic objectives of a number of the changes which are proposed by the Patent Commission and embodied in the proposed Patent Reform Act.

I got the impression from listening here that some feel that the bill proposed before the Congress is an all or nothing bill. In other words, you have to take it as it is or you cannot make any changes. I think if that is the case, we are under the wrong impression. I think we can make changes.

We should not just take a negative attitude, and steadfastly refuse to admit that we should change anything that we have been doing. That there may be doubts and reservations in changes is natural, but there are also many opportunities.

I want to make one or two remarks about the first-to-file system which have not yet been mentioned. There were some interesting statistics presented at the Congressional hearings. It was pointed out that in 1972 probably 100,000 patent applications will be filed in this country. Of these, 30,000 will originate from abroad, and 30,000 of the remaining 70,000 originating in the United States will be filed in an average of five countries abroad.

In effect then, it seems that a great majority of the applicants are already today voluntarily or by compulsion operating on a first-to-file system since they can only rely on a convention priority date here or abroad as the case may be. The other applicants of the remaining 40,000 U.S. originated applications, apparently, it would seem, would not have considered their inventions to have been of sufficient importance to warrant foreign filing.

Another interesting observation, I think, is that in scientific circles there is already what you might call a first-to-file system which is recognized to establish scientific priority. In other words, if a person makes a scientific discovery or observation and publishes it, the publication carries the date on which the article was submitted for publication. This is the "received" date, and in scientific circles when it comes to a question as to who is entitled to the priority for this scientific discovery it is the one who has had confidence in the validity of his work and his disclosure by first submitting it for publication.

So, it seems to me, that in scientific circles we already have in practice a "first-to-file" system, and that it would not be illogical to have such a provision in our patent system.

I do not think that the rush to the Patent Office will really develop to the extent some have suggested. After all, you have to meet strict requirements of the law as to your disclosure both with respect to the preliminary and complete applications. You also have to consider costs,

and although the thought here is to make the filing of a preliminary application a very cheap one—I think \$10 has been mentioned in testimony before Congress—I do not think that the situation will develop where we will be rushing into the Patent Office with a lot of such improperly disclosed inventions that cannot create any patent rights or an effective filing date.

MODERATOR FROST: Thank you, Harry.

We have a couple of questions here that get us into a different thought, namely, the Constitution, and I will read the one addressed to Mr. Brown:

“Please explain how the number of patent applications being filed can be reduced. Would moves in this direction conflict with the constitutional objective?”

MR. BROWN: I do not see any conflict with the Constitution or the constitutional objective in this bill. I would not criticize it on that point.

MODERATOR FROST: We have a question here for Mr. Mossinghoff.

What explanation may be offered for the present bill, S. 1042, not incorporating Commission recommendations—remember rule of reason in licensing, field abuse and so forth.

I might say, in explanation of that, the Commission Report includes a short section which states specifically that it would be desirable to have legislation which would include something that would indicate that a patent license in which the licensee was limited as to the licensed field of use would be valid.

MR. MOSSINGHOFF: When the President released the Report of the Presidential Commission on December 2, he referred it to the Secretary of Commerce, to his Science Advisor, Dr. Hornig, and to the Attorney General to develop a legislative proposal based upon the Commission's recommendations. Obviously this matter was referred to the Department of Justice because there is an interface between patent law and antitrust law. The Department of Justice has expressed its opposition to Recommendation 22, and in a practical sense, that answers the question as to why it was not included in the Patent Reform Bill.

Philosophically, it was very difficult for anyone—and I still have not heard an explanation—to say what Recommendation 22 would do in the area of misuse and antitrust. No one has been able to say or even speculate, with the language of the Commission included in a statute, whether price fixing limitations of the type approved in the *G. E.* case (*United States v. General Electric Co.*, 272 U.S. 476) would be acceptable. Nor has anyone been able to say whether *Transparent-*

Wrap type grantback provisions would be acceptable. (*Transparent-Wrap Machine Corp. v. Stokes & Smith*, 329 U.S. 637). About the only specific thing that inclusion of Recommendation 22 would result in—at least in my opinion—is a blanket endorsement of field-of-use restrictions.

The Department of Justice has taken the position that there are many cases where field-of-use limitations in license agreements are reasonable and well within the patent grant. On the other hand, it is not very difficult to envision situations where three competitors would get together and, under the guise of a field-of-use limitation, divide up a market in an economically unacceptable way.

The Department of Commerce is still studying Recommendation 22; we are anxious to see if anyone recommends an alternative to the language used. The ABA bill, at least as far as I know, still contains merely the language of the recommendation, and what this would do is uncertain.

I am not saying that a limitation restricting per se rules in this area could not be included in a statute, but we did not feel that the matter is sufficiently developed to include a legislative section at this time.

MODERATOR FROST: I think, again, I will exercise a little privilege here.

I wonder if any of the other panelists would have something to say on this point, particularly something on the pro side of having something of that sort in the legislation?

Joe?

MR. JACKSON: This section was massively discussed by Peter Drucker, who is professor of management of New York University, at the AAAS Symposium, and he took the view it was very indefinite and no one could tell what it meant. He felt something of the sort was desirable, but his view was rather close to what Gerry has told you. He felt that this was not clear thinking and did need much more study.

MODERATOR FROST: Are there any more comments on that from the group?

Let us go to a question for Mr. Shipman:

“Need a preliminary application show any more than the intervening references in order to overcome them? Does anybody need to study preliminary applications except insofar as what intervening references show, i.e., in the same situation in which these must take depositions under the present system?”

MR. SHIPMAN: It seems to me rather obvious that the only time the preliminary application becomes important is when there is a refer-

ence which falls between the date of the preliminary application and the date of the complete application.

Obviously too, the preliminary application is good only for what it shows and needs to be considered only to that extent. If you are considering it with respect to the reference, it needs to be considered only with respect to what the reference shows.

In many respects the preliminary application consideration seems to me to be the same sort of consideration that would be given to documentary evidence submitted in connection with an interference which is, does it show what is claimed.

MODERATOR FROST: We have more here that presents, I think, a new thought for Gerry Mossinghoff: "If the patent system is truly meant to be an exchange between the inventor and the public, how can you justify 'stealing a man's invention' by mandatory publication without the patent right in return? S.1042 does not even assure an office action prior to publication."

MR. MOSSINGHOFF: I think I would start by expressing my opposition to "stealing a man's invention."

The Commission felt, I think in this recommendation, that in order for the *quid pro quo* of the patent system to really be operative, disclosure to the public of the invention should occur at the time when that disclosure is beneficial to the public. It should not occur some seven or eight years after the filing of an application when the disclosure indeed is not worth much to the public.

So they emphasize, I think, the fact that prompt disclosure is the *quid* for the *quo* of the patent.

MODERATOR FROST: I have another. I think John Shipman should take it on:

"Do you agree with Mr. Parry's statement that the trend abroad is away from early publication and opening to public inspection?"

MR. SHIPMAN: That is a hard one to answer. Let me stall a minute.

I think the trend abroad definitely is coming toward more examining of applications, even if deferred, which I think Mr. Parry also mentioned.

MR. MILTON HARRIS: Abroad there has been an historical reluctance to communicate their ideas to each other. This is found, not only in patent and invention matters, but it is in some areas of politics. They have had histories of dictatorships, equivalent of dictatorships, where it has not been the most healthy thing to do to express your ideas freely.

Some of this carries back into inventions and discussion of technical

accomplishments. I can say that we have problems in our laboratories of almost exactly the same nature and same type as we have in our U.S. laboratories where inventors in France want to talk about their inventions just as much as the inventors in the United States want to talk about their inventions.

Whether this is different from what it has been in past years, I think the answer is, "yes" it is different. I am not sure why this comes about. It has been simply part of the whole industrial revolution that is going on in Europe.

MODERATOR FROST: I would like to ask Malcolm Parry whether this states what his real position was?

MR. PARRY: What I think I meant to say was that there are only two countries in the world—and I may be wrong in this—but I believe there are only two major countries in the world where applications are published while they are pending before allowance. Now, there were more countries five or six years ago where that was true. Now, I will stand correction on that if I am wrong.

MODERATOR FROST: Let me ask this question: "When you say 'published,' do you mean laid open to public inspection?"

MR. PARRY: I mean laid open, yes, sir. I only know of Australia, Ireland and, of course, Holland.

MODERATOR FROST: I suppose this is a fact question and we can have it for anyone interested to find out for himself, unless there is somebody that has any comment to make on that.

MR. WEISER: This comment is by way of supplementing Mr. Shipman's comment. Insofar as there has been a reluctance to communicate in Europe, I think it is also correct to state there has been a greater communication informally, verbally; the reluctance has been rather to put this into writing, in documents, as we practice it. The tendency today might be towards more formal licensing agreements, and this underscores the trend toward and need for a form of patent examination, for a more reliable and defined patent right that can be conveyed in the licensing (with the know-how) agreement.

MODERATOR FROST: Let us close with just this one last question which, at least it seems to me, raises a new point. It is to Mr. Mossinghoff or Mr. Allen, and I think the panel as a group might consider this addressed to each and every member:

"If the United States is at least 10 years ahead technologically of other countries, as was suggested this morning by Mr. Walton, is it not predictable that a universal patent system will quickly result in U. S. domination for even economists. If so, can you foresee acceptance of a

universal patent by the rest of the world sufficiently soon in the future to warrant compromising the present U. S. patent system?"

MR. ALLEN: I would not purport to comment on the point that the United States is 10 years ahead technologically because I think this is a highly debatable point. I think the advance of one country over another is perhaps not an important point. If we are talking about inventors, I do not think there are really any geographical boundaries to the caliber of invention.

As to the possibility of the United States dominating an international patent system, I would say that the countries with whom the United States has been in close contact—and the Commissioner and other people in government *have* been in very close contact with leaders of other governments including patent people—I do not think there is any thought on the part of these governments that we would dominate the system.

I do not think there could be, because many of these countries are as interested, and in some cases more interested, than we in the prospect of an international patent system.

MODERATOR FROST: Thank you very much.

I think on behalf of the audience and myself I would like to thank all the speakers and the panel members and say a word of appreciation for what they have done.

Part II—Will Proposed Legislation on Unfair Commercial Activities Pertaining to Trademark Identity and Trade Secrets Meet the Challenge?

DIRECTOR L. JAMES HARRIS: The Moderator of this part of our program is Harry R. Mayers who is a very active member of our Institute's Advisory Council and the General Patent Counsel of the General Electric Company. Mr. Mayers is an alumnus of The George Washington University Law School.

MODERATOR HARRY R. MAYERS: I don't know whether you share with me a feeling of rejoicing that during the last session, war did not break out again in the Middle East. I can assure you that for the

coming session in any event we shall not even have to summon the Security Council.

We are here to consider whether our challenges in the field of unfair competition will be met by pending legislation on that subject. While it is perhaps a little narrow of us to do so, we construe "pending legislation" in this context to mean primarily pending Senate Bill S. 1154, of which I believe you have a copy before you. This is frequently referred to as the Federal Unfair Competition Bill.

As you look at the well qualified list of panelists whom you are to hear, I am sure one question will occur to you, as it has occurred to me. That is, "What is Mayers doing on the platform?" The most constructive answer I can give is, "As little and as briefly as possible."

I think perhaps though that a Moderator should give a little background. In the copies of S. 1154 which I hope you now have, I want to call your attention to two things. First, Section 10 of 1154 would insert the words "unfair competition" after "copyrights," in Section 1338 (a) of the Lanham Act.

Now, with this change Section 1338(a) would read as follows: "The district courts shall have original jurisdiction of any civil action arising under any act of Congress relating to patents, copyrights, unfair competition and trademarks," so this is obviously the jurisdictional part of S. 1154.

Second, you will note that the bill does not limit itself to a mere mention of unfair competition. In Section 7, it daringly undertakes to define the subject in numbered subsections 1 through 6. What these momentous legislative gestures will do for us or to us is the subject of the discussions you are about to hear.

The first panelist is Professor Walter J. Derenberg who is a member of a well-known New York firm and a distinguished member of the faculty of New York University School of Law. I think most of you know that Dr. Derenberg's list of honors is too long to be read before any one audience, but there are a few highlights that I think are particularly relevant today.

In 1935, Dr. Derenberg established the first course in Trademark Registration and Protection given in any major law school in the United States. In 1946, he did a similar thing in respect to copyright law. In 1963, he was a Fulbright lecturer on International Trademark Law at Waseda University in Tokyo and this year he was given the "Great Teacher" award by the New York University Alumni Federation.

It is a pleasure to introduce Dr. Derenberg.

WALTER DERENBERG

Thank you, Mr. Chairman.

As your Chairman has pointed out, we have now before us a revised draft of S. 3681, the McClellan Bill, on the subject of a federal law of unfair competition, which had been introduced by the Senator in the Second Session of the 89th Congress, and which differs only in minor respects from the previously introduced S. 3681. It is, however, different in some important respects from H.R. 4651, the Lindsay Bill, which had been introduced in the 88th Congress, 1st Session, as an entirely separate statute on this subject and had met with some opposition on the part of a few practitioners and the government based on certain alleged anti-competitive effects thereof. The bill as now introduced (S. 1154, 90th Cong., 1st Sess.) has been revamped in the form of an amendment to Section 43 (a) of the Lanham Trademark Act of 1946 and consists of 12 sections.¹ This bill has already been endorsed in its present form by several organizations, including the American Patent Law Association, the United States Trademark Association, and is expected to be acted on favorably also at the forthcoming Honolulu meeting of the American Bar Association.

There is no reason why I should at this time emphasize the urgent need for this type of legislation. Efforts to pass a federal unfair competition act started in the 1920's, but became more pressing after the Supreme Court's decision in 1938 in *Erie R. R. Co. v. Tompkins*, 304 U.S. 64. As a result of that decision, unfair competition issues were relegated to state law even in cases where they were appended to trademark infringement actions and even though they may have been based upon substantially the same facts. (See *National Fruit Products Co. v. Dwinell-Wright Co.*, 47 F. Supp. 499 [D. Mass. 1942], *aff'd* 140 F.2d 618 [1st Cir. 1944].)

Moreover, it soon became apparent that our courts would be burdened in multistate unfair competition cases with applying the various state laws of all those states in which the unfair practices may have occurred. "Unfair competition is a tort governed by the law of the State where it occurs. If it occurs in a number of States it must be dealt with in accordance with their laws. . . ." (*Purcell v. Summers*, 145 F.2d 979 [4th Cir. 1944].) Some of our most eminent federal

¹ For the text of the now pending bill, see *Trademark Reporter*, Vol. 57 (February 1967), p. 109.

judges have, therefore, long argued for the enactment of a uniform federal act along the lines now included in the McClellan Bill. The late Judge Clark, in 1956, spoke of the need for a "complete and uniform law" (*Maternally Yours, Inc. v. Your Maternity Shop, Inc.*, 234 F.2d 538 [2d Cir. 1956].) And Judge Medina observed in 1959 that "Since most cases involve interstate transactions, perhaps some day the much-needed Federal statute on unfair competition will be passed." (*American Safety Table Co. v. Schreiber*, 269 F.2d 255 [2d Cir. 1959].)

However, since that time the need for passage of this type of legislation has been even more accentuated as a result of the two recent decisions of the United States Supreme Court in *Sears, Roebuck & Co. v. Stiffel Company*, 376 U.S. 255, and *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964), in which the Court held in two sweeping opinions that, at least in the area of misappropriation, there had been complete federal preemption by the patent and copyright laws and that the state courts lack jurisdiction even in cases of slavish imitation of nonfunctional features of products and even upon proof of secondary meaning, as long as the products sought to be protected did not come within the scope of existing patent or copyright legislation.

I need not repeat today what already has been said many times before, that, as a result of these decisions, our law of unfair competition has been almost completely emasculated and defendants in this type of action today enjoy something of a heyday since it has become almost impossible to prevail in actions of this type in the absence of patent or copyright protection.² It is, of course, true that some fair minded and courageous courts have already attempted to limit the scope of the *Sears* and *Compco* decisions, at least to cases of product simulation, so that relief may still be available in situations in which the defendant's unfair practices are not of this type.

Thus, in *Flexitized, Inc. v. National Flexitized Corp.*, 335 F.2d 774 (1964), the Second Circuit remarked: "We do not read the recent U.S. Supreme Court decision in *Sears, Roebuck & Co. v. Stiffel Co.* as establishing any Constitutional bar to the application of state law in the instant case." Similarly, an Illinois court had held in a trade secret case, *Schulenburg v. Signatrol, Inc.*, 212 N.E.2d 865 (1965), that *Sears* and *Compco* did not cover trade secret situations.

The Pennsylvania District Court has said, in the case of *Pottstown Daily News Publishing Company v. Pottstown Broadcasting Company*, 247 F. Supp. 578 (E.D. Pa. 1965), that it did not consider the famous

² See Derenberg, "Product Simulation: A Right or a Wrong?" *Columbia Law Review*, Vol. 64 (1964), p. 1192.

earlier decision of the Supreme Court in the *International News* case (*International News Service v. Associated Press*, 248 U.S. 215 [1918]) overruled by *Sears and Compco*. Similarly, the New York Appellate Division observed in the *World's Fair* case: "This court does not read either of those cases [*Sears and Compco*] as striking down or intending to strike down all state laws of unfair competition in all cases and for all purposes. A leading case on the law of unfair competition, *International News Service v. The Associated Press*, was not even mentioned in either opinion. . . . No attempt is being made in this case to give 'patent protection' to an article in trade 'too lacking in novelty to merit any patent at all' but to give protection for a brief two-year period to the valuable property rights of the spectacular and economic educational effort of a nonprofit organization." (*New York World's Fair 1964-1965 Corp. v. Colourpicture Publishers*, 141 USPQ 939 [Sup.Ct. 1964], *aff'd* 21 A.D.2d 896 [2d. Dept. 1964]).

However, most recently, another deadly blow was dealt the law of unfair competition when the First Circuit in the "*Paladin*" case held, for the first time, that in its opinion the *International News* decision must be considered overruled by *Sears and Compco*, although the court in the two latter opinions did not as much as mention that case. (*Columbia Broadcasting System, Inc. v. DeCosta*, 153 USPQ 649 [1st Cir. 1967].) Although the court agreed with the jury that the defendant broadcasting system in the "*Paladin*" case had been a "pirate," it went on to say: "Our Paladin is not the first creator to see the fruits of his creation harvested by another, without effective remedy; and although his case is undeniably hard, to affirm the judgments below would, we think, allow a hard case to make some intolerably bad law."

While, in my opinion, the adverse result reached by the appellate court in the "*Paladin*" case might have been justified on other grounds, it is always distressing—not only for the party involved—to read decisions which deny individual justice on grounds of overall policy considerations. We are reminded of a statement by a district court judge in one of the lamp cases before the Supreme Court's decision in *Mazer v. Stein*, 347 U.S. 201 (1954), where Judge Picard of Detroit had said, in denying relief: "While plagiarism in any form is to be deplored and certainly not condoned or encouraged, we are concerned here not with one's sense of fairness, but with the law." *Stein v. Benederet*, 96 USPQ 13 (E.D. Mich. 1952).

Moreover, it would seem difficult to take seriously the First Circuit's suggestion that the plaintiff in the "*Paladin*" case may perhaps have been entitled to relief if he had placed a copyright notice on the

visiting card which, among other things, displayed the picture of a chess knight. This sort of reasoning would seem to encourage members of our profession to advise clients to place copyright notices on products or materials obviously not within the scope of existing legislation, with the thought that they might conceivably persuade a judge that statutory protection may be had where the law of unfair competition will now be entirely unavailable.

But let us briefly revert to the pending McClellan Bill.³ Most interesting and important for our present purposes is Section 7 thereof, which amends existing Section 43 (a) of the Lanham Trademark Act of 1946 by including a catalog of unfair practices which will be deemed to be actionable provided they occur in interstate or foreign commerce. The first five enumerated specific practices include such activities as disparagement of a competitor, misrepresentation of goods, services or vocational activities, wrongful disclosure or misappropriation of trade secrets, and misappropriation of quasi-property of another not otherwise protected by federal statute.

This catalog of practices is then, however, followed by a most important catch-all or general clause, under which any practice which is "otherwise contrary to commercial good faith or to normal and honest practices in the business or vocational activity" may give rise to a civil action for unfair competition. This provision is patterned not only after corresponding general clauses in the laws of many foreign countries, such as Germany, Switzerland, and others, but also reflects the policy embodied in two international conventions to which the United States is a party, the Convention of Paris for the Protection of Industrial Property of 20th March, 1883, as revised, and the General Inter-American Convention for Trademark and Commercial Protection of Washington, 1929. Article 10bis, paragraph 2, of the former Convention, expressly provides that: "Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition;" and Article 20 of the Inter-American Convention reads: "Every act or deed contrary to commercial good faith or to the normal and honorable development of industrial or business activities shall be considered as unfair competition and, therefore, unjust and prohibited." Moreover, the proposed general clause is but a restatement of the broad language of Section 5 of the

³ A complete analysis of the bill may be found in the "Brief in Support of Congressional Passage of Proposed Unfair Competition Amendment to the Lanham Trademark Act of 1946," prepared by The National Coordinating Committee, and published in *Trademark Reporter*, Vol. 57 (February 1967), p. 87.

Federal Trade Commission Act, under which any "unfair methods of competition" in commerce and unfair or deceptive acts or practices are declared unlawful.

I have never been able to understand why we should hesitate to confer such broad general equitable powers on our courts when we have not been hesitant to vest an administrative agency with similarly sweeping powers. Furthermore, all of us who have been practising in this field, both here and abroad, realize that no specific enumeration of unfair trade practices will ever give adequate protection in the absence of a general catch-all clause of the type now embodied in subsection 6 of Section 43 (a).

The late Justice Brandeis stated, as far back as 1920 in his dissenting opinion in the famous case of *Federal Trade Commission v. Gratz*, 253 U.S. 421, at 437, that "an enumeration, however comprehensive, of existing methods of unfair competition must necessarily soon prove incomplete, as with new conditions constantly arising novel unfair methods would be devised and developed." And the late Edward S. Rogers, who was the first to recognize the need for a federal unfair competition act even during the 1920's, had said: "Experience shows that by the time the judicial machinery arrives at a place where the pirate was yesterday, ready to deal with him, that elusive person has moved forward and is still a little ahead—at a place where the courts will not reach until tomorrow—and is there engaged in doing something which will enable him to advantage himself at someone else's expense in some manner hitherto unthought of."⁴

It is my belief and hope that during the next Congress this legislation finally will be enacted since in its present form it does not present any problems of preemption or any constitutional issue. I consider it unfortunate that in the admirable Report on Copyright Law Revision, H. R. Rep. No. 83, 90th Congress, to accompany H.R. 2512, it is stated in connection with proposed Section 301(b) (3), under which state law remedies with regard to certain specified types of unfair competition such as passing-off and false representation would not be deemed preempted, this would not be true with regard to misappropriation and similar unfair activities. On page 100, the report says in this regard:

Use of the term unfair competition itself has been avoided because of its inherent ambiguity. In accordance with the Supreme Court's decision in *Sears, Roebuck & Co. v. Stiffel Co.*, Section 301 is not

⁴ Rogers, "New Concepts of Unfair Competition Under the Lanham Act," *Trademark Reporter*, Vol. 38 (1948), p. 259.

intended to preempt common law protection in cases involving activities such as false labeling, fraudulent representation and passing-off, even where the subject matter involved comes within the scope of the copyright statute. However, where the cause of action involves the form of "unfair competition" commonly referred to as "misappropriation," which is nothing more than copyright protection under another name, Section 301 is intended to have preemptive effect.

I suggest, however, that actual enactment of the pending McClellan Act before the passage of the new copyright legislation would take the sting out of this comment and, since it would be based on the Commerce clause, would not give rise to any further preemption problem.

Finally, let me just briefly mention one other collateral feature of the McClellan Bill. As most of you are aware, our Supreme Court has recently decided, contrary to overwhelming prior judicial authority, that a victorious party in a trademark infringement case cannot be awarded reasonable attorney's fees even in a case of willful and deliberate infringement. (*The Fleischmann Distilling Corp. v. Maier Brewing Co.*, 153 USPQ 432 [1967].) In other words, the Court adopted the *en banc* decision of the Ninth Circuit to this effect (*Maier Brewing Co. v. Fleischmann Distilling Corp.* 149 USPQ 89 [9th Cir. 1966]), on the ground that, contrary to the copyright and patent law, the present trademark statute does not specifically provide for such remedy. The McClellan Bill is attempting to change this recent Supreme Court ruling by statute, in expressly providing for recovery of reasonable attorney's fees in the discretion of the Court. In my opinion, this would seem to be particularly necessary in the United States since we are one of the very few countries in the world that has not provided any federal criminal sanction whatever for deliberate or willful trademark infringement. (Applause)

MODERATOR MAYERS: Thank you, Dr. Derenberg.

We are indebted to our next speaker who, on very short notice, agreed to fill in for Stanton Lawrence, originally designated, who found himself engaged in litigation on the West Coast.

Our next speaker is Mr. Thomas Hofstetter of the firm of Woodson, Pattishall and McAuliffe in Chicago and known to those of us who have heard him before as a rising member of the trademark bar.

Mr. Hofstetter.

W. THOMAS HOFSTETTER

I have been asked to comment on the practical impact, if any, of S. 1154 on unfair competition litigation. To evaluate that impact, I think it would be helpful for us to assume for the moment that that Bill is passed and then contrast that with the present situation. To do that I suggest that we should separately consider the three phases that are present in all litigation; namely, the events immediately prior to filing of the suit, the preparation for and the trial of the suit, and finally the post trial period.

Prior to the commencement of the suit, there are three basic questions that each of us must resolve—whether to sue, where and when?

As to whether to sue, the Act, we believe, will have quite an impact. It affords several causes of action that are not presently available to plaintiffs. Some of those provided in the Act and referred to a minute ago by Dr. Derenberg previously were available, but many, such as relief against product simulation, were not.

The two sections of this statute which I think present the greatest scope of new causes of action which are now available, are subsections 5 and 6 of 43 (a); namely, the portions referring to misappropriation of quasi-property, and subsection 6 which refers to the acts that are contrary to commercial good faith. This is very broad language and would cover numerous instances where today we would have no basis for relief in many of our state courts.

Assuming with the passage of this Act you decide that you do have a cause of action now and that it is appropriate, therefore, to bring suit, where shall the suit be filed? We presently spend a lot of time trying to answer that question for today we are faced with the problem of trying to determine whether the complaint should be filed in state court and, if so, which state . . . or should we try to bring the action in federal court?

If we have an unfair competition action related to a trademark claim, we can bring it in federal court under Section 1338, but in which circuit should we try to do so, or does it matter?

Today, with the federal courts required to follow the state decisions, we have found that the circuits have developed at a different pace and are not altogether consistent. Some circuits are known as plaintiffs' circuits whereas others are considered to be defendants' circuits. But more important, I think, is the fact that today we frequently find ourselves required to bring the suit in a state court.

With the passage of this Act, we could have an option of avoiding the state courts should we so desire.

The ability to avoid state courts is of no small consequence. It is often desirable to avoid state courts for the reason that many of our states are noncommercial and, thus, have had very few, if any, unfair competition cases. It is not uncommon, for example, after bringing suit in a state court, to discover, when digesting the cases, that the precedent that you have to go on goes back to the turn of the century and, as you might expect, it is not usually the "modern view." For example, some states today still require "actual competition" before finding unfair competition.

Commercial states have done far better in this connection, but by the passage of this Act, we will have an important option. We will be able to bring suit in the state court if we choose, but we will have an opportunity to stay out of the state court should we happen to be in an area where the state court has not developed a body of law or has not modernized the earlier decisions.

In addition to the precedents, or lack thereof, there are other significant disadvantages in trying unfair competition actions in state courts. For example, if your client is an out-of-state company, you may find yourself pitted against a local infringer, well known and liked in his community, or you may be confronted with local prejudices. This is particularly true in surname cases where the individual that you are trying to enjoin has been committing unfair competition by the use of his family name and everybody in town knows "Old Joe." Moreover, it seems to me that you always run a greater risk of politics when you have an elected judiciary such as you have in most states today.

Without the benefits of the Act, the situation appears to be getting worse. Today we even have to forum shop among the federal courts for jurisdictional purposes. A good example of that is the classic unfair competition case involving "passing off." In all but one of our federal circuits today, diversity cases involving passing off can be brought in federal court by alleging, for the jurisdictional amount, that the value of plaintiffs' threatened good will exceeds \$10,000 in value. The Seventh Circuit, however, now holds that federal courts no longer have jurisdiction in traditional passing-off cases.¹ As it now stands, no one can say how long the other circuits will continue to disagree with the Seventh Circuit and recognize jurisdiction in diversity cases involving passing off. Since the Supreme Court has thus far failed to resolve this conflict, the enactment of the proposed statute assumes added urgency.

¹ *Seven-Up Co. v. Blue Note, Inc.*, 260 F2d 584 (7th Cir. 1958).

Off hand, I can think of no significant effect of S. 1154 respecting the question of when to file suit. Section 12 provides that the statute will not affect any suit then pending at the time of its enactment. It may be, however, once it appears that S. 1154 is about to be enacted, that you may want to consider postponing the filing of an unfair competition action in order to avail yourself of the Act. This could be particularly true respecting the treble damage and attorneys' fee provisions of the statute which are presently unavailable.

The actual preparation for, and trial of, the case likewise will not be too greatly affected by the Act. About the only important practical effects that I can foresee in this stage of the litigation will be that of the availability of the federal rules of procedure, including the broad discovery rules with which you are all familiar.

Finally, we have had our trial and we are in the post trial period. I will not go into the obvious advantages and disadvantages of federal versus state appeals, but there is the matter of the enforcement of the injunction in unfair competition cases which I think we sometimes tend to overlook.

Having recently experienced some contempt proceedings in our state courts in Illinois, I am very much aware of the advantage of being in federal court if a contempt is at all likely. For example, in Illinois state courts, if, after successfully enjoining a defendant from committing unfair competition, you find he has not complied with the injunction, you must gather the evidence and prove the violations with no hope of reimbursement regardless of the willfulness of the defendant. This is not true in federal court and, thus, will not be true in any unfair competition action brought under the proposed statute. Moreover, once the unfair competition action is under the Lanham Act, the injunction can be enforced by contempt proceedings by the federal court in any district in which the defendant is found. (Applause)

MODERATOR MAYERS: I hope in accord with previous practice you are noting questions that you may like to have addressed to the panelists if we have some time for that at the end of the formal remarks.

In trying to shorten the introduction, I left out some background material which, in the light of comment of the last two speakers now seems to me may be useful to reinject as a matter of perspective before I pass on to the next speaker. The problem which gave rise in the first place to the seeming need for a federal law of unfair competition was,

of course, the doctrine that arose in the 1938 case of *Erie v. Tompkins* which involved a train-caused injury to an individual who was walking beside a railroad track. In that case, which arose in a federal court, the Supreme Court held that there is no federal general law and that except in matters governed by the federal Constitution or by acts of Congress, the law to be applied in any federal case is that of the appropriate state. Of course, the authority of that case extended to unfair competition causes as well as to any others, and if state laws differed with the result that the outcome in different federal cases differed, so be it, and that is the way it has been.

The direction toward a solution of this dilemma—at least the kind of solution which is now implicit in the McClellan Bill we are discussing—was suggested in 1957 in another Supreme Court case, *Textile Workers against Lincoln Mills*. Here an action was brought in federal court by a labor union under the Labor Management Relations Act of 1947, which provides that suits for violation of contracts between an employer and a labor organization may be brought in any district court having jurisdiction.

This particular case was for a specific performance of arbitration provisions respecting collective bargaining. It was objected that the Act was jurisdictional only and that it afforded no basis for the court to fashion a remedy, specifically, in this instance, enforcement of an agreement to arbitrate—which would generally be at variance with state and traditional common law.

The Supreme Court in this instance, however, thought otherwise and with the kind of sweeping wording which has become characteristic of its recent pronouncements held that the substantive law to be applied in the context of a National Labor Relations Act is—and I quote—"Federal law which the courts must fashion" adding that "Any state law applied will be absorbed as federal law and will not be an independent source of private rights."

So, on this foundation it would appear that the scenario has been written for a new federal unfair competition law, and that indeed this bill we are considering may prove to be such a law.

Now, our next speaker is Mr. Allen Brufsky of the firm of Berman, Davidson and Berman. He is one of the Research Staff of the Institute and is engaged with Mr. Lightman in a study of trademark factual material which the Institute hopes will develop into useful background of our knowledge of the operation of our trademark system.

He will tell you something of the work that he is proposing to do in that area.

ALLEN D. BRUFISKY

Thank you, Harry.

It is my intention to confine my remarks this afternoon to a few brief comments concerning the progress of a study undertaken in depth by the Institute during the last year in the field of unfair commercial activities. This study relates particularly to the role played by trademark identity in the field of unfair commercial activities.

The study was initiated primarily to develop factual and empirical information on the economic role of trademarks in the American business community and their value and utilization as business assets. As corollary objectives, insight in the commercial factors governing management's trademark policies and the need for improvement, if any, in the protection afforded a trademark owner by present legislation, was sought.

After deciding to use the questionnaire or survey technique to solicit our data, a test questionnaire was developed and a pilot study conducted in order to determine what changes and refinements would be needed for a more extensive inquiry. After completion of the pilot study, the results being reported in the Fall 1966 issue of *IDEA*, a final questionnaire was decided upon and a large mailing was completed this spring.

The questionnaire was divided into four basic parts: Part 1—soliciting statistical data on the extent of trademark ownership and usage by the company questioned; Part 2—seeking data on the cost and manner of trademark selection; Part 3—seeking information on the company's experience under existing trademark law and suggestions on needed improvement, if any; and Part 4—seeking data on trademark licensing sales.

In addition, an appendix was added to the questionnaire designed to obtain specific information to determine the value of a trademark to the company and what its maintenance costs consisted of.

Obviously, the answers to the third part of our questionnaire are most germane to the subject of this panel—will proposed, or parenthetically, existing legislation on unfair commercial activities pertaining to trademark identity meet the challenge? The questions in this part of our survey ask industry to describe briefly the major problems encountered because of possible deficiencies in existing trademark law in the United States and abroad; and to suggest possible remedies.

Completed questionnaires are still being received, as detailed and

comprehensive information is sought. Accordingly, it would be premature at this time to present any conclusions or findings.

Myself and my colleagues, Bob Bangs and Joe Lightman, hope to present a detailed report in the Fall issue of *IDEA*, and possibly shed further light on the subject of how present legislation is working out in practice and the need, if any, for new legislation in the field. (Applause)

MODERATOR MAYERS: Our final speaker is Dr. Irving H. Siegel of the W. E. Upjohn Institute for Employment Research. For many years, he has been a consultant to The PTC Research Institute. I understand he will talk on the subject of trade secrets.

I have a short observation on that subject. Insofar as it pertains to the law of unfair competition, a certain company, Telechron, Inc., with which I had a connection, had litigation in the 1950's. In the case, called *Telechron* against *Parissi* one of the issues was whether breach of confidential relationship or misuse of an alleged trade secret was or was not unfair competition for purposes of dependent jurisdiction which was a problem in that case. The Second Circuit Court of Appeals held that breach of confidential relationship or abuse of trade secrets is indeed a species of unfair competition. So the fact that S. 1154 specifically lists trade secrets among the subjects which will fall within the ambit of unfair competition, is in accordance with existing tradition.

IRVING H. SIEGEL

I shall base my remarks this afternoon on two sets of materials. One is a paper written jointly with Dr. L. James Harris for the Fall 1966 issue of *IDEA*: "Trade Secrets and Positive Competition." The other is a questionnaire used in a PTC Research Institute survey on the role assigned to trade secrets by firms of different size in various types of industries.

Trade secrets deserve recognition as a class of productive information pertinent to a regime of "positive competition"—the economic order in which we actually live and operate. Dr. Harris and I have

developed this concept in several papers, linking it with trade secrets in the Fall 1966 article. Other kinds of production information are important too: (a) the disclosures covered by patents; (b) know-how, which occasionally is intended to be protected as a trade secret but is more often regarded as "confidential" in a less legalistic sense; and (c) the technical ancillary information that is vital to the practice of an industrial art and is explicitly or implicitly transferred in the fulfillment of licensing agreements or, say, government procurement contracts. The expansion of sponsored research, the performance of much of this research under contract, the fluidity of scientific frontiers, the growth of interdisciplinary inquiry, the quest for new products and processes embodying scientific principles—these factors contribute nowadays to a substantial enlargement of the scope of potentially productive information.

Likewise, these factors account for a vast proliferation of opportunities to establish trade secrets. The very growth of the corps of scientists and engineers working in private industry provides a remarkable potential for the generation—and the violation too—of trade secrets. The relatively static numbers of annual patent applications and grants contrast sharply with the multiplication of potential or legally protectable trade secrets represented in privately held technical information.

I should tell you something at this juncture about our concept of positive competition. This concept applies very well to the technologically dynamic world in which we live, the order that is commonly called just "competition" by the people who experience its stern challenges. The term refers to the demonstrably "working," rather than a merely "workable," competition. It refers to a world that *is*, not a world that *ought to be*; to a world that has proved capable of significantly enhancing the material well-being of people, despite egregious gaps and failures, and that is also believed capable of remedying many of its own observable deficiencies. Antitrust literature and legislation, I might add, obliquely acknowledge the current vigor and favorable prospects of our positive competition when they assume that the "competition that does exist in our country is substantially robust and effective to warrant protection against any 'lessening.'"

Dr. Harris and I start, in other words, with business behavior that is pervasive, "conventional," and essentially "legal." True, there is always a penumbra of uncertainty about the legal acceptability of certain business practices; but it is also true that mechanisms exist for continual review and redefinition of the corpus and the boundaries of proper economic behavior. Indeed, the very processes of legal challenge and judicial interpretation are parts of the system of positive

competition. The system can accordingly purge itself and correct itself in some degree; and it is certainly capable of viable change and evolution in response to new pressures, new needs, and alterations in social values.

Within this context, trade secrets seem to have an ever-vital role to play in our dynamic economy. In Section 757 of the Restatement of Torts, which Dr. Harris and I mention in our Fall 1966 article, six criteria are offered for determining whether or not a bit of privatized knowledge qualifies as a trade secret. I need not elaborate these six points for an audience in which the legal profession is so well represented. Besides, Dr. Harris is the legal half of our trade-secrets team.

Instead, I want to stress that three relationships ought to command our special attention in assessments of the role of trade secrets in our world of positive competition: the relationship between employer and employee; that between the firm and the government (as represented by the federal and state legislatures and courts); and that between a firm based in our country and the foreign government agencies and individuals with which it deals. I shall concentrate on the first two of these relationships.

In modern circumstances, rapport between an employer and his staff with regard to trade secrets is necessary for the progress of invention and innovation. Individuals have access to a growing volume and variety of private information important to a firm's profit-making capability. The development of this information typically entails huge outlays for formal research activity. The employee expects a salary or some other definite reward for his contribution; this return to the employee has to be validated eventually by the market benefit that is derived by the firm.

Employer and employee have to recognize a mutual interest in confidentiality. The employer, however, has to take the initiative in defining the need and the "property" involved. He also has to establish and maintain a proper environment, one that is conducive to respect for his rights in this exclusive intangible property. The PTC Research Institute questionnaire seeks particularly to illuminate the employer-employee relationship.

Sooner or later, firms that have valuable information that they wish to preserve from competitor exploitation on equal or better terms discover the merit of formal agreements with key staff members. In the course of processing a new employee, a natural opportunity exists for frank acknowledgment of the problem of confidentiality and for "routine" action to mitigate the danger of a breach. At this stage too,

it is easier to ascertain if the new man may prove a "Typhoid Mary"—an unwitting carrier of secrets from another firm. Furthermore, one may more readily ascertain at this stage if the employee is under any obligation to conceal past work from his new employer and new associates.

Responses to our questionnaire suggest that it would be well not only to clarify (a) relationships involving pre-employment secrets and (b) conduct on the job respecting new secrets but also to clarify (c) the treatment of privileged information after an employee leaves. Turnover among younger scientific workers is high; and it is reasonable to confront at the outset the possibility of an early departure, before any sense of loyalty develops that overrides other considerations. Besides, employees who depart often harden their attitudes toward past employers and associates; in fantasy and in conversation, they stress real or imagined grievances that "justify" their voluntary separation and, perhaps, any subsequent breach of confidence. By formal agreement, it is desirable to circumscribe, legally and within reason, the future behavior of people with respect to the secrets to which they have access or which they have been paid to help generate.

My experience with technical employees has impressed me that the dangers of unethical appropriation and peddling of privileged information are insufficiently appreciated by all concerned. It is commonly assumed by an employee that he "morally" has property rights in secrets he has helped to generate, even if he has already been paid and even if an oath has been signed. Furthermore, when the work leading to secrets has been done by a team, an employee who feels insufficiently credited for his contribution or who wishes to exaggerate his importance may merely see "justice triumphing" when he is simply committing an act of bad faith in a new setting. Clearly, the environment established and maintained by an employer is important for the protection of secrets, even if formal agreements have been made.

I confess that what Professor Draper said this morning startled me a bit. The employee conduct that academic-type organizations have come to expect and to condone is commonly regarded as questionable or reprehensible in the business world. A man working in a university on, say, a government contract does not necessarily "own" the ideas that he contributes to a joint work and for which he is being compensated. He may indeed go forward with a dream and a gleam to found a new firm—but not altogether as a Columbus. He may be more like Robin Hood, and far more selfish. What goes on Route 128 does not, I fear, seem right on, say, Route 495, with which I am more familiar.

Of course, I recognize that a man cannot (and should not) be prevented from maturing professionally on a job and taking with him a vast store of information and know-how. I also recognize that an employer may give his blessing to a departing scientist who wants to become an entrepreneur. What should concern us is that an employer may be allowing the appropriation by an employee of an intangible that does not belong unambiguously to either (e. g., a secret generated in the course of contract work for a client such as government). Also of concern is the common case in which the employee withholds an idea developed on the job, having probable value to the employer or a client, and in defiance of a prior oath.

The foregoing indicates, in short, that:

(1) An employer who believes that information or know-how developed on the job should be protectable as a trade secret has to take steps that communicate his position to his employee and that also have legal recognition.

(2) An employer should also try to regularize deportment concerning secrets obtained in prior work and post-termination deportment concerning secrets developed or encountered on the job.

(3) An employer ought to take a clear position with regard to *all* valuable private information and proprietary reports, keeping in view also the employee who has no "need to know" or can abuse access to information and reports he did not even help to generate.

(4) An employer should, insofar as practicable, try to reduce dangers of information-stealing and confidence-abuse by paying well enough, by providing competent project supervision, and by fairly bestowing credit.

From a psychological point of view, a management would be well advised to avoid (a) highly legalistic language and (b) the impression of duress in its early address to the issues of data protection and in the agreement form it places before a promising applicant. An employee should not be made to feel from the very start that the employer is ungenerous and unreasonable, that the protection agreement is "a one-way street," that the agreement represents only an outrageous and probably unenforceable precondition of unemployment rather than a realistic and binding code of conduct.

At this point, I should mention that employers vary much more widely in their attitudes toward trade secrets than they do toward the privacy of information. The two attitudes should not be confused. Companies that proclaim they have no trade secrets are found among the manufacturing respondents to The PTC Research Institute questionnaire, even in industries in which their competitors do assert the

possession of secrets. In some nonmanufacturing industries, such as food distribution, even very large organizations do not seem to bother to protect information as trade secrets. This failure to go the trade-secret route does not mean, however, indifference to the privacy of information vital to the profitability of a firm. Precautions are surely taken with regard to all sorts of valuable data. Perhaps, an important instance of breach of confidence has to be experienced before a company considers the wisdom of identifying the basic trade secrets it wishes to protect legally.

A favorite subject of mine is the handling of creative personnel. Companies that wish to protect information from competitors by direct means, or by the maintenance or elevation of staff morale, certainly have to consider the nature of the people who are in a position to develop valuable technical data or systems. Creative people have conflicting impulses to reveal and conceal, as I shall elaborate in an article to appear in *IDEA*. Management should understand this ambivalence and affect the balance on behalf of disclosure. Neglect of opportunities to debrief creative people in a proper atmosphere and failure to establish and maintain rapport with them too often deprives a firm of the full benefits of the learning, invention, and know-how generated in the course of work.

The PTC Research Institute's study discloses instances in which migrant employees leak information, or set up rival firms; in which prosecution is undertaken; in which failure to take adequate precautions discourages prosecution. We may expect the business and professional communities to become more concerned with problems of loss and of protection of information.

I come now to the relation between the firm and the government. In earlier papers prepared by Dr. Harris and me for *IDEA*, we anticipated that pressures would be exerted to expand, strengthen, and render more uniform the state laws that are applicable to trade secrets. We noted that many states have introduced bills or enacted statutes concerning trade secrets—Georgia, Illinois, Minnesota, Nebraska, New Jersey, New York, Pennsylvania, and Wisconsin. Recent state legislation has been mostly of a criminal nature.

Greater uniformity in state laws is needed, especially because competition and research are not confined by state boundaries. Indeed, the interstate and international character of competition and research suggest a greater future emphasis on federal legislation to cover criminal acts relating to trade secrets. Some of the respondents to The PTC Research Institute questionnaire who have had relevant experience seem satisfied with existing legislation, but a greater number

seem to feel that the national scope of research activity requires federal law. Congress has warily approached the problem of legislating for trade secrets.

The difficulty of determining first what trade secrets are will apparently continue to militate against enactment of criminal legislation on the federal level; but the law of unfair competition offers a promising avenue for federal efforts to protect confidential information. In this connection, Dr. Harris and I wrote the following in a postscript to our *IDEA* article of Fall 1966 as we considered the bill introduced by Senator McClellan in August 1966:

The original broadly phrased legislation [on unfair competition] has been sharpened specifically to include trade secrets—partly in response, no doubt, to the *Sears* and *Compco* decisions of the Supreme Court. If enacted, federal civil legislation would for the first time be taking account of a species of proprietary information historically left to the common law for protection. Thus, despite the apparent lack of demand for a trade-secret civil law, such legislation may yet be enacted on the national level as part of a management effort to provide for unfair competition in the federal statutes. A statute relating to unfair competition would indeed seem to be an appropriate place to assert that trade secrets are recognized by federal law. The law of unfair competition is based on the general principles of fairness and equity, principles especially appropriate to the governance of trade-secret relations.

Thank you. (Applause)

Panel Discussion and Question Period

MODERATOR MAYERS: Time is beginning to compete unfavorably. There is a question for Dr. Derenberg:

"Is anyone against S.1145, and, if so, who and why?" A second question which I would like to give to Dr. Derenberg at this point is, "Granted that it may be unlikely that there will be found any statutory pre-emption of the territory of S.1154 insofar as it purports to deal with quasi-copyright issues, let us say, is there any likelihood that the Supreme Court may find there is a constitutional pre-emption based upon the theory that in the light of the section of the Constitution which establishes power to create a specific kind of protection of writings and inventions, there remains no power outside that one to cover this area?"

DR. DERENBERG: I believe I have already answered both these questions. With regard to the first question, I am not aware of any substantial opposition to the pending bill, at least not by any professional group or by any substantial number of individual members of our profession. The Assistant Attorney General in Charge of Antitrust has, however, indicated in a recent paper¹ that the department again intends to oppose the enactment of this legislation on the ground that even in its present form it may have some "anti-competitive" effect. I do not know whether the Federal Trade Commission plans similarly to appear in opposition to this legislation. It is our hope that in due course the Attorney General may be persuaded that a bill of this sort would not in any way restrain competition generally, but would only serve to protect the public and business against unfair and deceptive practices.

With regard to the second question, I do not believe that enactment of the McClellan Bill would raise constitutional questions since it would be based on the Commerce clause, as were the Trademark Acts of 1905 and 1946, after the first Trademark Act of 1870 had been declared unconstitutional by the Supreme Court in the so-called Trade-Mark Cases, 100 U.S. 82 (1879) because it had been erroneously based on the patent and copyright clause of the Constitution, rather than on the interstate commerce clause.

MODERATOR MAYERS: One more question which has been addressed to Mr. Hofstetter assumes, I take it, the passage of S.1154:

"Must the cause of action in unfair competition arise after the effective date of the proposed action for the law to apply?"

MR. HOFSTETTER: Section 12 of this Act says that, "This Act shall become effective upon enactment, but except as otherwise herein specifically provided, it shall not affect any suit, proceeding or appeal then pending."

I would take it that that means once this statute is enacted, even though the prohibited activity previously was lawful, such activity would become unlawful at the time of enactment. However, the statute simply will not apply to any proceeding or suit then pending. As far as pending Patent Office actions are concerned, I believe this provision would only bar you from asserting the Act in the continuation or appeal of that proceeding. It would not bar you, as I understand this provision, from asserting the statute against the same

¹ Turner, "Advertising and Competition," an address before the Briefing Conference on Federal Controls of Advertising and Promotion sponsored by the Federal Bar Association, Washington, D. C., June 2, 1966.

defendant based on the same facts, in a separate proceeding subsequent to the final decision in the Patent Office.

MODERATOR MAYERS: We do have other questions, but in view of the fact that we are running past our time and into the early part of the evening, I believe I am going to conclude this session at this point with many thanks to the panel members for their eloquence and to you for your durability.

(Whereupon, at 5:45 p.m. the afternoon session was adjourned.)

The Kettering Award Address

The Kettering Award Address was given by Lawrence R. Hafstad, Vice-President in Charge of the Research Laboratories of General Motors Corporation, at the Award Dinner of the Eleventh Annual Public Conference of The Patent, Trademark, and Copyright Research Institute on Thursday evening, June 22, 1967, at the Shoreham Hotel, Washington, D. C.

Dr. Hafstad received the Institute's 1966 Charles F. Kettering Award in recognition of his outstanding contributions as scientist, inventor, industrial leader, and public servant, and for his meritorious work in patent, trademark, and copyright research and education.

Lay Comments on the Proposed Patent Law

LAWRENCE R. HAFSTAD

WE HAVE ALL LONG BEEN INTERESTED in the United States patent system and no little concerned that it should seem to be under attack. Its purpose, as well as its effectiveness, is being questioned, and claims are made that conditions are now so changed that the patent law as we know it is obsolete. I read that the law has not been changed for 130 years, and this is given as a need for a basic overhaul. While need for changes may be indicated, this specific argument leaves me cold. Our Constitution is considerably older than our patent system, and I am tempted to add that the Ten Commandments are a lot older than either. What endures must contain some element of good, and in my mind this should be a symptom of strength, not of weakness.

As this group is well aware, one can find roots of the patent system in reports on ancient Greece, in the patents to Galileo and others during the Italian renaissance, and in the Tudor monopolies in Great Britain. But it is too often overlooked that in the Colonial period, the Colonies granted a relatively large number of patents, and, in fact, by the time of the Revolution the patent activity in the Colonies was very substantial. We cannot perhaps claim to have originated the patent system, but there is much to support an argument that the Colonies created a new and independent center for the growth of the patent concept.

Our first patent act of 1790 was much more of an innovation than is sometimes recognized. It led the first British patent act by many years. It is the first specific statute to start an enduring patent system. It said that anyone complying with the statutory terms had a right to a patent—a vital and basic change from the concept of the royal grant made by the British Crown as a matter of favor.

While there is much to view in the United States patent system as representing the results of an economy and of political thinking that was independent and leading in its day, we must not belittle what other countries have done. Indeed, depending on how one wants to argue the history, some of them may lay claim to earlier antecedents than our own. At the very least, I suggest that those who so lightly assume that the world should adopt our particular system should bear in mind that—while we have a case to be proud of—we did not originate patents, and others may have some good ideas, too.

If we ignore the extremists, there is agreement that some system of incentives is desirable. Even the Russians have found that out. The argument really is about the details of the system which will be most effective at least cost. Here I wish to emphasize that I speak not as a professional expert in this field, but as a concerned and interested amateur. My grown life has been spent not in worrying about patents, but in learning how to bring to bear on real social problems the reservoir of knowledge created by, or which can be created by, science. For this reason, as I talk about patents and patent law, I can only give my impressions, based on my frequent but only incidental contact with this field.

In recent months we have all been exposed to the pros and cons of the proposed new patent law. The objectives are unassailable—namely, (1) to raise the quality and reliability of United States patents, (2) to reduce the time and expense of obtaining and protecting a patent, and (3) to speed public disclosure of scientific and technological information.

In the fine print, however, and in the discussions, one encounters confusing questions of both procedure and policy. There is lip service to the underlying need to provide incentive for the actual inventor, but the real worry is all about the excessive work load for the Patent Office; whether title to inventions from government R&D should go to the government or a contractor; and the inherent iniquity of any monopoly, even one created by the government itself. Finally, there is much concern about the patent rights of the professionally employed inventor as against that of his employer, whether in private industry or in government. I will comment on these matters later.

I have been interested in patents all my life, for as a child I had older brothers who were enthusiastic but unsuccessful basement inventors. Encouraged by patent lawyers, they got patents all right, but made no sales! I can say from first hand observation where much of the overload of the patent system comes from.

Since those days I have been interested in reading all I could about patents. I have found it instructive but confusing to peruse the literature, for while the same words—such as the word “invention”—are used repeatedly, the game is to guess from the context in which the word is used what that particular author really meant by his use of the word. When sociologists and economists write about inventions and how they are made and laboratories and how they operate, I find it hard to recognize their description of a field in which I have spent most of my life.

I am reminded of an anecdote related by my favorite math professor at Johns Hopkins in my student days. He was warning us that mathematicians were usually socially unpopular, and he had a very plausible explanation. Social conversation, he reminded us, was like a game of tossing a small balloon from one person to another. Each makes some polite remark and passes the conversational lead to a neighbor. When the conversation reaches the mathematician, he is apt to ask rudely, “Will you please define your terms?” This is equivalent to poking a pin in the balloon and completely ruins the game.

In the patent law discussions I've been reading, a little more mathematical precision in definitions would be most useful. I could give you many examples, but one will make the point. In a recent article the proponents of government ownership of title to inventions are said to “view the alternative as analogous to building a bridge with government funds and then turning it and the toll rights over to the contractor.” Here the word “invention” is clearly taken to mean the completed, commercially-proven entity, quite contrary to the usual meaning of the word as referring to conception alone—but then perhaps the misinterpretation is deliberate!

In reading on this subject it is especially necessary to consider the source and to allow for the motivations of the authors. The patent lawyers and other professionals in the field certainly know the meanings of their use of the words, but authors distort meanings in accord with their emotional bent. There is also some vested interest in the confusion in terms, even for the “pros.” From the rich collection of quotes in Gilfillan, for example, we can find a statement that patent litigation has become a game . . . and “the better the player, the more complicated and uncertain he likes the game to be, and the more

likely the result is to be a triumph of the skill of counsel rather than a determination of the real merit of the patent or of the defenses."¹ In contrast to engineers, many lawyers are not problem solvers—they are paid to be argument winners! I cite the current United Nation's debates as evidence.

The above comments are made to emphasize the distinction and the wide gap between an invention and a successful commercial product. This distinction is basic to much of the current controversy. In recent professional R&D literature, invention is recognized to be a first step in the process of innovation. Further, it is recognized to be a small step in most cases. In the recent Charpie report, "invention" is estimated to represent not more than 5 percent to 15 percent of the cost of innovation.² There is really a long row to hoe between "invention"—which for this use may be taken as meaning proven technical feasibility of a novel potentially useful device or process—and commercial application, let alone commercial financial success. Even within a single company, and for people with great prestige and influence, innovation is recognized as being an even tougher job than invention. To quote C. F. Kettering, "(The) greatest durability contest in the world is trying to get a new idea into a factory."

In my personal opinion much of the current controversy about our patent system arises because this recognition of the distinction between invention and innovation is at odds with popular American folklore and mythology, and the hopes and dreams of individual inventors. Many patent lawyers may disagree with this statement, but patent lawyers talk mainly to each other and draw their conclusions from a highly unrepresentative sample. As the American dream has it, based on conditions a century ago, the lone basement or backyard inventor gets a simple, novel, but revolutionary idea, like putting a wiggle in the hairpin wire, gets a patent, and his fortune is made. In such simple cases invention and innovation are synonymous. In this day and age, however, especially for industrial applications based on modern science, most inventions involve much more sophisticated ideas. It is not so much that the inventive process itself has changed, as that the innovation component of the overall process is assuming a continually increasing role. Invention is still absolutely essential, for this triggers the rest of the process, but we now need at least equal incentive for

¹ S. C. Gilfillan, *Invention and the Patent System*, Report for Joint Economic Committee, 88th Cong., 2d Sess. (Washington, D. C.: G.P.O. December 1964).

² *Technological Innovation; Its Environment and Management*, Panel on Invention and Innovation, Technical Advisory Board, Department of Commerce. (Washington, D. C.: G.P.O.).

innovation in addition. This is an unpleasant fact of life which our liberals find it convenient to ignore. To quote H. L. Nieburg,³ himself certainly no reactionary—"The small band of Liberals that opposes 'give-aways' fails to grasp the inefficacy of the solution proposed (strict public title) to solve the problems which it vividly describes."

Before giving my comments on the proposed law itself, I would like to discuss a bit more some of the problem areas with which the law seems to concern itself.

The basic question of "monopoly"—which is, after all, what is created by a patent—I will pass quickly, for it is outside my area of competence. As a layman I assume it is the government's business to devise equitable rules for the game to be played by our competing free enterprise activities, and that the government will, further, police the activities to prevent cheating.

The question of government title to government-financed inventions is one with which I have had considerable experience, and this may make my impressions in this area of some value.

I would like first to talk about the situation with respect to the Atomic Energy Law, where the government holds all titles, and then the practice at the Department of Defense where there is more flexibility.

Having been an "atom smasher" by trade since 1928, I am personally aware of the step-wise development of the technology in this field, both prior to and during the secrecy period of World War II. I was indirectly involved during the formulation of the McMahon Act, and after the war served with the AEC in administering many contracts under the patent provisions of the 1946 Act.

To be candid, though my basic bias is that of a free enterpriser, I had no difficulty in either accepting or defending the policy of government title to patents, even those emerging from embryonic privately financed research. Here, in addition to the overwhelming taxpayer equity in the technology, where an entire new industry was created at government expense, there were the urgent national security arguments.

My experience with the Department of Defense patent policy has led to quite different conclusions. I served in the Pentagon for several years under James Forrestal and Vannevar Bush as Executive Secretary of the Research and Development Board. At about that time I was also Chairman of the then Interdepartmental Committee on Science, wherein we made one of the early determined efforts to get a uniform

³ H. L. Nieburg, *In the Name of Science*. (Quadrangle Books, 1966.)

patent policy throughout the government. This experience gave me an appreciation of the number and diversity of the problems to be met in an activity as large and ramified as that of the United States government.

In military procurement it has long been traditional to give title for patents to the contractor, retaining royalty-free use for the government. This policy has always worked well through the years, for with the extra carrot of patent rights, the contractor could and would assign his best and most experienced men, as well as his backlog of technology, to the solution of any urgent military problem. No real conflict of interest from either direction arose as long as the military business for any company was small compared to the civilian business which was carried on by that company.

It is this picture that has changed since World War II, with the enormous expansion in government procurement and expenditures, especially in the R&D area. Now with many companies concerning themselves primarily with sales to the government and only incidentally to the civilian segment of the economy, it is understandable that the question of who should get title should be raised, since in many cases the government is already paying for the development as well as the product.

The series of recent bills relating to patent law in Congress address themselves to this problem. The wording of these bills is technical, but the intent (for example of McClellan S-1809) can be adequately indicated for our purpose here by a paraphrase from a recent magazine article:⁴

For activities financed by the government this bill "provides that the government usually shall acquire the principal rights in inventions: (1) made during contracts whose purpose directly concerns public health, welfare or safety; (2) intended to develop an item intended for commercial use by the general public; or (3) in a field of science or technology where there has been little experience outside of work funded by the government."

These principles and conditions seem eminently sound as far as the equities in the inventions themselves are concerned. As stated above, it is part of American folklore that a patent represents a path to riches since it provides a monopoly on manufacture and sale of the product. In fact, this is still true for simple items such as hula-hoops, plastic toys, household gadgetry, et cetera. But these are not the kinds of inventions that come out of defense technology. In my opinion the key

⁴ *Scientific Research*, Vol. 2, No. 4 (April 1967), p. 43.

question is, "What happens next *after* the patent is turned over to the public?" If, when an invention financed by the government is turned over to the public, several manufacturers immediately start production and begin to compete for lower price—then the public is served and public-title approach is a success. If, on the other hand, the manufacturers shun the patent since they no longer have any hope of protecting their chance of recovering high development or tooling costs—then the high sounding operation of "giving the patent to the public" becomes a completely useless gesture, regardless of its political appeal. In fact, it is worse than useless; it is negative. By "giving the patent to the public" in such instances, it ensures that no manufacturer can pick it up, and the public will not receive its benefit in the marketplace.

Based on my experience in the government, the wide variety of cases makes for exceptions to any fixed rule.

In the Pentagon situation the R&D program is so large and diverse that, by selection of examples, a case can be made for either government or contractor ownership of title. There can be cases where new technology is developed entirely at government expense, with automatic fall-out in the civilian economy. At the other extreme there can be cases where technology developed completely at private expense is brought to bear on urgent military problems.

The most recent review of this problem area led to the Kennedy Memorandum and Statement of Policy of 1963. This has proven to be realistic in that it provides flexibility for the responsible administrators to protect the government's interest but yet be sensitive to the just deserts of contractors in specific situations. Any residual problems that have been experienced have been more in the carrying out than with the intent or authority involved in this policy.

The possibilities of give-aways are in any case probably greatly exaggerated. Government developments usually come in the military or space "cost-is-no-object" category, and much further development is needed before products can compete in the extremely cost-conscious civilian market. On balance, the public is more likely to profit in the long run from a policy encouraging the further development for the civilian market, rather than one which tends to freeze a development at the governmental cost level. Here, as in many cases, the time proven adage applies that—"Everybody's business is nobody's business."

For this reason I feel that the burden of proof should be on the government to show that the public would really profit in some manner by a patent not given to the contractor.

Another of the areas of major controversy, according to current literature, is that involving the individual inventor and his incentives

and rights. As one extreme we can read that under modern conditions all inventions are team inventions, so that the individual inventor and the patent system are no longer needed. This is indeed patent nonsense! The individual inventor is still as important as ever. Xerography by Carlson and the Electrolytic capacitor by Ruben are examples of such contributions made well after the era of large-scale laboratory R&D was begun. Creativity is a very personal thing, and no matter how large the laboratory, the "invention" or contribution to the invention is always made by some individual. The team does not make the invention; it is made by a member of the team. For those of us in the business of research and development I think this is axiomatic.

I have always had the uncomfortable feeling that lawyers know all about patents except how they are made, or as I would prefer to express it—how they come about. According to my observations, the key idea emerges or crystallizes out of a slow process of trial and error with respect to many ideas. There may be the "flash of genius" experience frequently cited in patent literature, and the feeling of elation when the key idea is finally recognized as a path to success. The invention, however, is rarely born full blown—so that by noting the day and time, calling a witness and writing furiously in a note book, the exact nature and time of the invention can be recorded for all of posterity. The key idea emerges from among a host of other ideas; it does not descend suddenly out of a clear sky like a bolt from the blue.

For an invention to be made there is invariably a need, or a problem to be solved. Such a need will normally be attacked by many people using great skill and competence and state-of-the-art techniques. Many technical problems yield to this approach, without ever reaching the invention stage. Quoting Judge Hand: Nothing is an invention which is the product of "the slow but inevitable progress . . . through trial and error" and of "the exercise of persistent and intelligent search for improvement." It is when this conventional approach reaches an impasse or at least obviously diminishing returns that the stage is set for an invention.

At this point each individual concerned begins to tell himself that there must be a better way, and begins to generate ideas for new approaches to the problem. These ideas are then filtered for practicality, first by the individual and then further by the group if the individual is a member of a team. Most of the ideas go by the board, but in rare cases a germ of an idea emerges with which no obvious fault can be found. With further careful nurturing, this idea begins to take form as promising a qualitatively different approach to the

solution of the original problem. It can only then begin to be recognized as an invention—or as a quantum-jump or break-through, in more recent vernacular. No matter how large the organization, some certain individual had the key idea and can at this point be established as the inventor with at most a few other individuals as contributors.

As a corollary to the above continuous and sequential process of invention (as contrasted with the isolated step-function concept which would be more conveniently administered by the Patent Office), it is worth emphasizing here that it follows that a claim for an early date for an invention can always be made if the criteria for proven feasibility are correspondingly reduced. I will mention this again later.

In addition to the controversy as to whether inventions are made by individuals or by a team, there is the question of how to reward inventors who choose to work as part of a team. It is true that this was not visualized in the early days when the patent system was devised, and the patent system is certainly supposed to give incentive to the potentially creative individual to go ahead and create.

Does our present patent system provide adequate incentive for an inventor to invent when he is part of a large team?

I cannot presume to answer this very fundamental question, but can only give my impressions. First, let me say that I have been signing papers giving patent rights to some employer or other since 1940 when I left work in pure science. I have never felt “forced” to sign these papers, as current liberal writings never miss an opportunity to imply. Neither threats nor torture were used that I can remember, and to the best of my knowledge I wasn’t drugged. Then why did I sign?

I believe the answer is that, for me as for most engineers, I like to consider myself a professional problem solver. The problems may or may not involve the need for inventions, but if they should, I feel as competent to invent as the next man. So many technical problems exist which do not involve inventions that as a “pro” I personally have preferred to work as a problem solver on a salary, with invention being incidental, rather than as a free lancer seeking riches from a single invention.

Some people just seem to want to work on something difficult, challenging, and socially significant—problems too large for attack by a single individual. The hope is to make a contribution toward the overall solution which will result in the recognition and approval of one’s peers. In these large affairs many kinds of problems arise and many different kinds of people are needed—and we are all problem solvers. The people making the inventions are making contributions

with their particular expertise, as professionals, just as is each other member of the overall group. If the overall group is successful, each member is or should be rewarded—by money, if the operation is commercial, by personal satisfaction in addition if it is in the national interest.

A comparison might be instructive: Let us compare a laboratory to a baseball team, with the inventor analogous to a home run hitter. The latter could conceivably be paid a fixed amount for each home run, with even a bonus for a game-winning home run. No one seems to feel that home run hitters are abused, however, for working on a salary and getting salary increases and bonuses as rewards for good performance. The professional inventor whether in industry or in government is similarly rewarded, and is even more free than the baseball player to seek a new employer if he has reason to feel inadequately appreciated.

The team approach to invention is an effective method for spreading very large risks for very large rewards. In this sense it is no different from other forms of insurance. The inventor who chooses to "go-it-alone" is the reciprocal of the home owner who chooses not to insure his house. The inventor accepts a long period of low returns in the expectation of high rewards later; the home owner saves a small premium over a long period of time and hopes to avoid the possible conflagration at some future time.

This is the way it is—but this is not the way American folklore has it. From what I read, the employed inventor "alienates his stake in possible patents, et cetera, et cetera. . . ." The implication is that his rights are usurped by management and that the incentive to invent intended by the patent system for the individual is no longer effective. However, so long as the patent system provides the incentive for management to encourage its employees to invent, what has been lost?

It is the business of management to function in such a manner that the productivity of "n" people working together is greater than the productivity of "n" people working as individuals. I like to call it introducing drift or direction into what would otherwise be Brownian motion. Profit is the index or measure of the effectiveness with which management does its job. Management has, therefore, every incentive for so arranging the working conditions of its technical employees as to encourage invention. In fact, the competition between industrial laboratories is specifically that of maximizing the output of useful technology and therefore of profitable inventions per dollar expended for research.

The myths, however, persist. One of the first things I was able to do when joining General Motors a few years ago was to satisfy myself

directly regarding the persistent myths that steam-powered cars were known to be better than gas-engine powered cars but were held back for commercial reasons—that 40-mile-per-gallon carburetors had been patented and were suppressed to prevent reduction in sales of gasoline—and so forth. I can add my observation to that of others that the suppressed invention is most certainly a myth.⁵ In fact, my experience with big industry has found it to lean quite in the opposite direction. On numerous occasions when inventions are made which the corporation chooses not to exploit, the patent rights are transferred or licensed to the inventor, who then (often with associates) resigns from the corporation as a “spin-off” and starts a small business of his own. In the GM laboratories this has occurred mainly in connection with instruments which were developed for specific uses in the business, but which for commercial reasons the corporation did not wish to manufacture.

Based on the above impressions, I would now like to give my reaction to some of the more critical aspects of the proposed new patent law. Most important to me is the attempt to seek compatibility with other Free World patent systems. Modern communications have made the world shrink dramatically. This was brought home to me some time ago when I read the following comparison: The horse and buggy of a generation or two ago permitted travel at say six miles per hour. The 707 jet plane goes 600 miles per hour. When we apply this factor of one hundred to distance, the world is no longer 25,000 miles in circumference, but only 250! It is no longer 8,000 miles in diameter, but only 80! From now on, privacy, independence, sovereignty, and “isolation” are going to be hard indeed to come by.

As one who is convinced that the only way to defeat Communism is to out-perform it, I would urge that every effort be made to combine the best features of all of the several Free World patent systems, and that the emphasis should be on the effectiveness of the system rather than on the convenience of control. No doubt the President’s Commission did make some study of these matters, especially taking into account European experience. But in recommending a change to the “first-to-file” concept the two main justifications given seem to be (1) convenience for the Patent Office and (2) the tacit assumption that “the first to file is more apt to be the inventor who first appreciated the worth of the invention and promptly acted to make the invention available to the public.” In my opinion the first of these should not be controlling and the second argument is certainly not convincing.

⁵ Gilfillan, *Ibid.* p. 98.

In my reading in this area I stumble again, as I stated in the beginning of my talk, on a lack of definition of words. First to file, O.K.—but first to file what? This is the critical point. How is the potential flood of half-baked ideas to be controlled?

To those of us working in the field it has finally become obvious that an invention must be more than a bright idea—it must be a feasible and useful device or process. To the general public it is still merely a bright idea. In my company we have a large activity called the New Devices Section in our Engineering Staff, whose sole duty it is to handle the bright ideas that we all get by mail. They arrive at the rate of 700 per month and all must be processed and answered as a matter of business courtesy, as well as screened for the rare useful nuggets for which we might wish to negotiate licensing agreements.

Over my desk recently have come letters noting that the limitation on the electric car lies in the constantly depleting battery, and suggesting a very simple solution—namely, to use a generator (which never wears out!)—instead of the battery!

On the face of it this suggestion is so preposterous as to be amusing. However, in all seriousness there is the germ of an idea here. A hybrid car with a small prime mover running continuously, and through a generator charging a battery, which in turn provides power for the wheels, is indeed a possibility for future low-smog cars. Actually many companies including GM are seriously exploring this possibility. The problem is not to conceive of a combination which can work. Many combinations are entirely feasible. The problem is to devise one which is really practical and economical. For this, much experimental work is required.

Now suppose our enthusiastic inventor continues to follow developments in the literature and elsewhere, and files for a series of paper patents approaching closer and closer to technical feasibility. At some point long before the experimental work necessary to prove commercial practicality is finished, a first-to-file patent may be granted to our paper inventor. Is he to receive royalties from other inventors or companies who took the time and trouble for actual reduction to practice? Would it be just that the actual inventor should be denied the right to use the results of his own extensive work by someone who had done much less much later? On the other hand should it really be necessary for every inventor who can think up a feasible combination of prime mover, generator and battery to file promptly for a patent? Twenty years ago we used to say that every time three engineers got together with four bottles of beer a new guided missile was born. Unless more safeguards for the first-to-file procedure are revealed than

have so far been explained, I would predict that the number of claims for inventions for low-smog cars alone might quickly approach infinity.

Certainly the purpose of our patent system should be to encourage and reward the true inventor, and not the purveyor of unproven paper proposals. "First to file" seems to substitute appearance for substance. It is not surprising that the patent community is resisting the proposed change—although it is both interesting and significant that in this case the large companies (traditionally accused of being most reactionary) are less inclined to raise objections than small business and independent patent lawyers. While the difference of opinion is real, to me it is reassuring for the long run that any conflict between the United States and European patent systems is not like the difference between the English and the metric systems, completely irreconcilable.

Compromises should be possible, and with further discussion and debate, opposition may well be reduced to a point where some accommodation to a system for world-wide use may become possible. Complete conformity is unnecessary to genuine and effective international cooperation. To illustrate, there may be compulsory licensing in one country and not in another without preventing effective interaction. Scholarly studies to this end might well be a project for the Research Institute to undertake, for considerable give and take will be involved and arguments more persuasive than that of convenience will be required.

On the question of the overload of the Patent Office, as a layman I do not feel competent to make suggestions. It seems clear that some procedural change might be possible to reduce the amount of work spent on unimportant claims. Since vested interests are involved, this is as much a political as it is a technical matter. Again, a scholarly study by an objective group would seem to be indicated. In matters of this kind it is often useful to take steps to separate carefully the question of what *ought* to be done from the question of what *can* be done.

In conclusion and in summary, I wish to be on record that I feel that our present patent system and procedure has served us well and promises to continue to do so. Evolutionary changes certainly may prove to be desirable but even such changes should be made with due caution. The overall objective must be to handle fewer and more significant claims more justly—rather than a high volume of weak claims more conveniently. Compared to other activities on which much government money is now being spent, the cost-effectiveness of our patent system, measured in returns to the economy and therefore to the tax-paying citizen, is very high indeed.

Friday, June 23, 1967
SECOND SESSION

Prospects in Industrial and Intellectual Property Law

Part III—Will Proposed Legislation on Government Patent Policy Meet the Challenge?

DIRECTOR L. JAMES HARRIS: Ladies and gentlemen, for the benefit of the new arrivals, my name is James Harris. I am Director of The PTC Research Institute.

This morning we are resuming our sessions of the Eleventh Annual Public Conference.

Yesterday we had a very spirited discussion in our first session on "Protection Needs in Research and Development." There we presented the problems.

Solutions were proposed and discussed in the Second Session, Part I, on the President's Commission Report. In Part II of the Second Session, we directed our attention to proposed legislation on unfair commercial activities pertaining to trademark identity and trade secrets. Last night we had a very provocative address by the 1966 Kettering Award recipient, Larry Hafstad, Vice President and Director of the General Motors Corporation Research Laboratories.

Today we continue the Second Session with Part III. The experts will direct their attention to proposed legislation on government patent policy to determine whether it meets the challenge of improving the system for greater social progress.

Slips have been distributed for questions from the floor. If you have

any questions, write them on the slips and pass them to the sides. Our assistants will be picking them up during the session.

As I said yesterday, our panelists are all very highly qualified and we have a very tight schedule, so I am not going to take the time for long introductions.

Charles I. Derr, the Senior Vice President of Machinery & Allied Products Institute, is the Moderator for the government patent policy panel. He has participated with us in several of our programs in the past. I know he is going to develop a very interesting and productive session this morning.

Mr. Derr.

MODERATOR CHARLES I. DERR: Mr. Harris, ladies and gentlemen, thank you for that flattering introduction.

Just by way of introducing our very distinguished panel before I turn over the microphone to them, possibly for the benefit of those few people in the United States who have not heard about the government policy controversy, let me attempt to set the stage.

The topic of our subject might be "The Search for Government Patent Policy" or the "Search That Controversy Has Provoked." The controversy has increased in volume as the spending by the government has increased in amount. In general, as you know, legislative as well as administrative proposals for government patent policy have extended in either of two quite opposite directions. One approach would give to the government all right, title and interest to inventions resulting from government-sponsored research and development. This is the so-called "Title Policy." Contrary-wise, the "License Policy" would grant to the contractor principal right, title and interest with a royalty-free, nonexclusive license to practice anywhere in the world given to the government.

In practice, as a matter of fact, in legislative proposals hitherto introduced in Congress, there has been a tendency to merge the two so that nothing like a completely perfect title policy or complete license policy has emerged.

Two fairly recent events, both triggered in part by a third, deserve mention before I turn to our distinguished panel.

The catalyst that I am referring to is the fact that over the past several years in the case of individual research and development authorization bills there has been a tendency on the part of Congress to engraft upon such legislation, so-called title policy amendments;

most of them are introduced by Senator Long of Louisiana. They are known collectively, I think, as the Long Amendments. Out of all this confusion, out of the controversy that as I suggested has grown over the past 10 years, two final lines have emerged.

In October, 1963, the then President Kennedy issued a Presidential Memorandum on Government Patent Policy. It was not altogether title or altogether license in its approach, but it did undertake to impose upon administrative agencies within the limitations of existing statutory law a general policy with reference to the disposition of patent results under government R&D.

Its effect was to say that you will apply a policy according to the research and development mission of the contracting agency and subordinately according to the contracting circumstances of the individual situation.

Secondarily and because the Congress and more specifically the Patent Subcommittee of the Senate Judiciary Committee felt distinctly it was necessary to have legislation in the area. Senator McClellan, Chairman of that Subcommittee in the last Congress, introduced S. 1809. I might add, I am going much too swiftly. This was the culmination of a good many years of work by that Subcommittee and the successor to a number of prior bills that I think are unimportant to our present discussion.

At the same time, Senator Long, the title policy adherent, author of those amendments to which I referred previously, introduced a bill that in general would have imposed a title policy across the government.

The essence of S. 1809, the McClellan Bill, upon which full hearings were held, on which eventually the full Senate Judiciary Committee voted and approved the essence of the bill, was to enact into law the policy initiated in the Presidential Memorandum of Mr. Kennedy.

No floor vote was ever taken. S. 1809 died with the last session of Congress. Senator McClellan has not introduced any legislation of this character in the present session of Congress. However, I am told, and I think it is reasonable to infer that S. 1809 remains the essential position of the Senate Judiciary Subcommittee on Patents, Trademarks and Copyrights. This, I take it, is the essential piece of proposed legislation which we are going to discuss here this morning, although of necessity we will have to discuss the Long proposed legislation.

One other bill has been introduced in the current session on the House side by Senator Ribicoff of Connecticut, a man who has been very interested in this subject. His bill is H.R. 458.

So much for the stage. Our speakers or panelists as Professor Harris said, are highly qualified, each a distinguished spokesman on this subject in his own right.

Without further ado, I give you the first of our speakers, Mr. Roland A. Anderson, Assistant General Counsel, Patents, of the U.S. Atomic Energy Commission.

Mr. Anderson.

ROLAND A. ANDERSON

Mr. Derr, members of the panel and gentlemen, as well as a lady: It is always a privilege to address any group in connection with the government's program. Usually our discussion pertains to specific details of contract clauses or regulations, thus the opportunity to discuss the general problems at a public conference is most welcome.

This morning I hope we will have these views more explicitly explored and that you will benefit from this exploration.

Our topic is "Will the Proposed Legislation on Government Patent Policy Meet the Challenge?" What legislation? I was glad to hear Mr. Derr set the stage when he said he presumed it was S. 1809. I took it this was the topic, therefore I will center my remarks about whether or not that meets the challenge?

What is the challenge? Is it that the government should take title? Is it that the contractor should take title? Is it that nobody should take title? And we should publish? What is the challenge?

As a patent attorney, it seems to me the challenge is to maximize utilization of inventions in the civilian sector of the economy. We must recognize that much of the government R&D work is used by the government. This often is overlooked. We always want to assess government patent policy on the basis of what is the commercial use.

However, there are no figures on the defensive use by the government. I doubt that we will ever get any figures that will be authoritative or that we can say they are conclusive. We are gathering, and have gathered, a few facts here, a few facts there, on which we can possibly piece together the fact that certainly some of these government patents the government holds are being used by the government. I say this from the experience I have had in the atomic energy field.

There is not—I will make this statement over and over again—a reactor manufacturer in the United States today who has not employed one or more of the patents that are held by the Atomic Energy Commission in the field of atomic energy. So consequently, we will say they are being used not only in the government sector, but in the civilian economy, in civilian reactors, in the isotope development programs and other civilian activities in the atomic energy field.

This, I think, is as it should be. We have a challenge in atomic energy to promote peaceful uses. Here I speak not only of our domestic program but also of the international aspect.

However, coming back to the theme, if we believe that utilization of the patent in the civilian economy is the goal, in the creation and transfer of this technology to the civilian economy as the important sector of patenting, then we could divide the subject into two categories, the one sector is the government sector, the other sector is the civilian sector. The government sector, we could say, has two phases, the defense and nondefense, or civilian. The other sector dealing with the civilian economy has two phases, they are the noncommercial and nonindustrial uses and the commercial and industrial uses.

So as far as the government sector is concerned, as I have already mentioned, the government does use, and so far as that sector is concerned, whether it be military, defense or civilian, a government license should satisfy the selfish interest of the government as government. However, I think we must recognize that that overlooks the fact that you and I as taxpayers, while we are the government, we are individuals also and have a right to a certain extent to see that our money is wisely spent and that the fruits of that money are made available for the best possible use in our economy. Thus, is not the challenge to assure that legislation maximizes the utilization of inventions that rise from government R&D in the civilian economy? If such is the goal, then you have the question we face, "What is the most effective method for a government patent policy to accomplish such a goal?"

Let us assume a defense contractor under a government R&D contract develops a new defense TV or radar system. Under a license policy the government, if the license is broad so that it accords to the United States government a license for U. S. governmental purposes, protects the United States government's interest. However, our world, as Dr. Hafstad said last evening is getting smaller and smaller. So therefore, we must consider whether or not the United States government should not have the authority to grant licenses in connection with international arrangements and agreements with foreign govern-

ments. Such a broadened license might serve to satisfy the needs of the government.

Now we come to what do you do to assure use of such advanced defense communication system in the civilian sector of the economy? How do you get it into the civilian economy? Would a license to a contractor be sufficient to get it there? Must exclusivity be accorded to someone, whether it be the contractor or someone else to exploit it?

If it is an advanced system such as Dr. Hafstad mentioned last evening, perhaps somewhere along the line we need some encouragement for the fellow who assumes the risk. What kind of encouragement? Should it be the contractor? Are we sure he is the best one to exploit the invention? Should it depend on the extent of the market—95 percent of use is that of the government. Suppose a contractor has little manufacturing experience for products in civilian economy, should the contractor be permitted to have the exclusive right?

Then you have other aspects and other types of inventions—for example, you have the fertilizer field where the government acquired the rights and granted licenses to everyone who wanted to use the process and product. Thus these products and processes became available to the consumer by the producers employing the agriculture inventions of nonexclusive licenses from the government.

We are not therefore, I feel, dealing with a problem that is simple. There is no one pat answer. It is a many sided problem.

Is the research basic or programmatic? Does the government carry the invention to the final solution or to a practical application, or does it only point the way?

Is the product ready for marketing or must marketing programs be undertaken?

Is the government the prime user or is the prime user someone else?

If it is a process, how much is needed to make change from the existing process to the new invented process?

These and many other questions you and I can raise. Throughout this presentation I want to re-emphasize the goal of “maximizing utilization.” Does S. 1809, the McClellan Bill, meet the challenge as I see it, of “maximizing utilization”?

For many years, the U. S. Department of Defense has been generally said to have had a policy under which the contractor has retained the exclusive rights. What have the contractors done? We oftentimes hear that the government holds 8,000 patents and none of them are being used in the civilian economy. How do you expect use if you believe that exclusive licensing is necessary and the government does not have authority to exclusive license?

What have the contractors done? There are only a few statistics. They are not convincing, but certainly up until five or six years ago, many companies did not even use inventions themselves and very few, if any, had programs of exploitation, not only of the patents acquired as a result of government contracts but of their own patents. It is only in the past several years that we have seen some of the larger government contractors form exploiting firms or corporations. This, I think is the fruit of the debate on government title versus license over the past decade. This, I think, is a fruitful thing that has come about, that these corporations that did have these things have now been forced to try to make the utilization to see whether or not they should be maximized in utilization.

I believe that S. 1809 has much in its favor. Of course to say that, one must believe that a strong United States patent system is an effective force to stimulate the individual and industrial initiative of our country. There are many who have a tendency to minimize patents as an effective force in our economy. And from a socio-philosophical position, this may have some merit. However, looking around us, what do we find in other countries? Do we find that the countries that do not have strong patent systems do have strong industrial positions? I think we will find that the greatest industrial advances and the highest living standards are in those countries that have strong patent systems. The patent systems I submit have had an effect on industrial and commercial progress. Sometimes some of us might feel that patents may have a greater effect than they actually do. However, I think that a good many of us find that there is a balance between patents and industrial progress, and we recognize that those countries that have strong patent systems have strong industrial organizations and have higher standards of living than the others.

One important facet of S. 1809 is the fact that for the first time it would set forth for all the United States government not just one agency or department, a consistent overall policy. This undoubtedly would save time in negotiating. Contractors would know where they stood with respect to the overall government. We would not have the delays in connection with contract negotiations which has been one of the criticisms of government patent policy.

Prior to the Presidential statement of October 10, 1963, to which Mr. Derr referred, there was no uniformity or consistency. The Presidential Proclamation of October 10, 1963 has done much to aid in crystallizing one consistent policy subject to existing statutes.

I am a firm believer in the Kennedy policy statement. I would like to see it given a real try. However, almost the day it was born, several

members of the Congress immediately said we must pass legislation as the executive branch of the government cannot dictate the policies for the overall government of the United States. This I think was a little unfortunate, because some of us who were enthusiastic about the Presidential statement, lost some of our enthusiasm and felt it looks as though no matter what kind of statistics we can gather, never mind what kind of approach we take, Congress is going to legislate and legislate before we can get facts concerning the effect of such policy.

Some who would criticize the fact that the government agencies have been slow in connection with the implementation of the Kennedy policy statement, I would say to you in defense of those of us who are in the administrative branch of the government, the introduction of legislation has had a salutary slowing effect. I think this has been unfortunate.

However, as Mr. Derr pointed out, S. 1809 does cover most of the same facts and follows pretty much the Presidential policy statement. I am not going to have time to review the entire bill but will only emphasize two or three things. It provides for the principal rights being in the government in four situations subject, however, to greater rights being accorded the contractor when the equities warrant and when a small business or a nonprofit organization is involved. It provides for the contractor acquiring the principal rights when the product is to be used for the government and when the contractor has a nongovernmental commercial position in the field of contract activity.

It also provides for deferment of rights in those instances where you can't decide at the time of contracting. These are similar to the Kennedy statement. However, it has two important factors that are not in the Kennedy statement. The first is that where the principal rights are retained by the contractor, if the invention is not utilized, the government can step in and compel utilization by compulsory licensing or some other method. Some people have said this is horrifying—to think that the government can step in and compel licensing. However, if we believe in maximizing the utilization of inventions resulting from government-sponsored work, it isn't so horrifying when one considers the safeguards of a full hearing before any rights are taken away.

The second difference is that this proposed legislation authorizes the government agency to accord exclusive licenses where it is deemed necessary to promote the inventions. This means that the government, if it owns the rights, could promote through use of exclusive licensing as well as nonexclusive licensing. If we believe that the patent system

is a sound system for economic growth and should result in maximizing the utilization of inventions then possibly this bill meets the challenge in that it recognizes both sides of the issue and provides for means to assure utilization. It says, Mr. Government, if you don't use and you don't find users on a nonexclusive basis, you may exclusively license for limited periods. It says to you, Mr. Contractor, if you do not utilize or have somebody else utilize, or do not promote or bring it to practical application, somebody else may do so or be requested or authorized to do so.

This is where we probably should come out. I would like to go on and emphasize these points, but I believe my time is up and I must defer to the other panelists.

Thank you. (Applause)

MODERATOR DERR: Thank you very much, Mr. Anderson.

Our next speaker is Dr. Robert A. Solo, Professor of Economics and Management, Graduate School of Business Administration, Michigan State University.

Dr. Solo.

ROBERT A. SOLO

"Will the proposed patent legislation meet the challenge?" This is the question that has been put before us. The proposed patent legislation with which I am here concerned has to do with inventions produced through government-sponsored research and development. Specifically, the bills under consideration are S. 1809 and H.R. 458 which would enact as law the existing patent policies and practices of the different government agencies in all their diversity and variation; and H.R. 3095 which would concentrate control over inventions made under government contracts and grants in a new, independent Federal Inventions Administration. This Inventions Administration could reward worthy inventors. It would be charged with publicizing the availability and encouraging the use of the inventions it controlled. And its Administrator would have a wide latitude in disposing of such inventions—possibly arranging for royalty-bearing exclusive licenses, or

nonexclusive, royalty-free licenses. In special cases the proprietary interests of the United States might be waived.

These then are the alternatives: Continuing decentralization under the status quo, or centralizing control over patents in a new administration independent of those agencies that fund research and development. Will either one or both of these alternatives "meet the challenge"? But first, a prior question. What is this "challenge" that needs to be met? What governmental objectives might patent policy for this category of invention accomplish?

There are (I suggest), with respect to patent policy for invention of this sort, three relevant levels of social objective and responsibility.

(1) To encourage creativity in the performance of government-sponsored R&D. This would in part result, presumably, in more inventions and in more significant inventions per dollar of government expenditure.

(2) To encourage the disclosure of inventions made under government contract or grant, and to facilitate the dissemination of the scientific and technological information embodied in those inventions, both intramurally among government contractors, and between the space-military sector and the universities or commercial enterprise.

(3) To promote "spillover," that is, the utilization by commercial, market-oriented enterprise of inventions made through government-sponsored research and development.

These are important tasks of government. And (I would suggest) that patent policy of the sort with which we are here concerned must relate to these tasks if it is to have any functional relevance at all. But do these tasks constitute a challenge? In the sense that there is an urgent need to raise the level of creativity in research and to improve the dissemination of scientific and technical information and the "spillover" of advanced technology. I think there is such a "challenge" and a very grave one.

If, for example, inventions provide an index of creativity then creativity in government-sponsored R&D lags far behind the norm. An average R&D dollar produces from five to 10 times more inventions when the selfsame company is funding its own R&D than when its R&D is funded under government contract.

And if the commercial utilization of inventions produced through government-sponsored R&D is any index of "spillovers" then spillover surely lags far behind reasonable expectations. For there has so far

been only the most trivial, inconsequential use made in the commercially oriented, market-enterprise sector of patented inventions produced under government-sponsored, special-purpose R&D. And this has been just as true for those inventions where exclusive commercial rights have been waived to private contractors, as it has been for the substantial block offered freely to the public.

So there is indeed a challenge. But how, you may ask, can this challenge be met through patent policy or through control of the disposition of inventions, whether in promoting R&D creativity, or in disseminating scientific and technical information more effectively, or in encouraging "spillovers"?

Let me illustrate how patent policy can relate to this challenge with three examples.

Suppose that the objective is, at long last, to build into the relationship between government contractee and company R&D contractor a positive company motivation to encourage invention and the disclosure of invention by its employees, when those employees are working on government contracts. In order to do all this, contractor inventions might be evaluated, and information concerning the number and significance of inventions produced by each company per R&D contract dollar could be used, systematically, in the process of source evaluation as a basis for the award of future R&D contracts.

Or again, complex and comparatively effective systems for disseminating scientific and technological information have developed and are developing among the great agencies of government. These systems abstract, sort and classify, machine-search and need-focus, and, generally, promote an awareness of the availability of such information; and they gear that information quickly and automatically into niches of potential interest and use. Strangely, the patent and the bundle of technical and scientific information it contains, seems hardly ever to have been fed into these information-disseminating systems. Of course it should be; and when it is, the format and organization of that bundle of information must also be changed—emphasizing education and popularization rather than the lawyers' classic preoccupation with hedgehog defenses against possible infringement.

Finally, to achieve "spillover" or "the transfer of technology," is never a simple task. A technology means the integral capability for some purposeful action embodying usually a cluster of inventions and much else besides. To apply that technology—that totaled capability—to a different use in a different context is difficult. It requires a series of creative adaptations, replete with risk. If government agencies wish

to encourage innovators to spearhead the advanced technologies developed through special purpose R&D into new applications or into new fields of application, then one part of the strategy of encouragement might be to offer the protection of exclusive rights to an invention, or better, to a related cluster of inventions, to the pledged or potential innovator.

This then constitutes "the challenge" and these are some of the ways that patent policy and the control over inventions relate to that challenge. But does this proposed patent legislation (any of it) meet the challenge? Not at all. Not in the slightest way. It is not intended to. It was not shaped or designed for that purpose.

Nevertheless, the proposed legislation has some relevance to what is here at issue. Supposing that policymakers will eventually become aware of what "the challenge" really is, then it can reasonably be asked, (as between the existing dispersion of control that one set of Congressional bills would perpetuate, or, as proposed by another set, the concentration of control in an administration independent of the R&D agencies) which of the two would provide the sort of organization best suited to "meet the challenge"?

From the standpoint of an organizational ideal, I would argue that discretion and control should be left with the R&D agencies. As I have already suggested, patent policy should not be understood as a thing in itself. Rather it is an instrument that needs to be integrated into an agency's general strategy for promoting research creativity, for disseminating scientific and technical output, and for encouraging the wider utilization of the advanced technologies that its R&D efforts have produced.

But more is involved than the formulation of an organizational ideal. Within and transcending organizational form is the character of the agency itself. And there can be no doubt that each of the long established departments of government has its character, deeply implanted, self-perpetuating and hard to change. That government agency which is and has been the largest source of R&D funding—namely the U. S. Department of Defense—has an enduring orientation that renders it oblivious to the values and indifferent to the task of encouraging the transfer of technology and moreover, that profoundly inhibits any effort freely to disseminate scientific and technological information. For that reason I would favor the transfer of control over patented inventions arising out of all Department of Defense contracts to an independent agency—or better still to NASA which is strongly oriented toward, and is relatively well organized in, disseminating information and promoting the transfer of technology. (Applause)

MODERATOR DERR: Our last but no means least speaker is Dr. Barkev S. Sanders, Actuarial Consultant to the Graduate School of Public Health, University of Pittsburgh.

BARKEV S. SANDERS

Mr. Chairman, ladies and gentlemen, I feel the human mind has not expanded very rapidly and of necessity we behave like the seven blind men faced with the elephant. The proverb characterizes our intellectual confusion in understanding our world.

Some of us have become specialists. We look just at the one point that we know something about. We forget that this point has wide interrelationships. We begin to see what we can do for this little point to function better forgetting that the changes would induce many other changes in the whole system of which we know very little about. I feel that with the government patent policy as we are discussing it, we are in this dilemma.

The government is spending 20 billion dollars, we call it R&D. I don't know that R&D means the same thing to General Motors or General Electric and to different governmental agencies. It probably means entirely different things to different groups. But in order to simplify it for our understanding, we have labeled it R&D. Then we begin to say now, what is the outcome from government R&D as compared with private R&D expenditures. I have repeatedly said if we really use this label as an equivalent homogeneous thing, then one privately used R&D dollar produces much more in terms of patented inventions of economic significance than \$1000 government R&D.

Now to change these vast systems, the profit motive and so forth by offering gifts and other ways to increase the little trickle of inventions that we get from this vast \$20 billion R&D expenditure by the government, which has many other purposes, should be judged in terms of these other justifications and not in terms of what it yields in economically useful patentable inventions. I think these other objectives should really be the criteria. However, if we are going to use useful patented inventions as the criteria, then I think the results seem obvious. In the private sector where patented inventions have

functioned, we find a very high proportion of them being commercially utilized and having effective results. In the government sector, if we are going to justify in terms of commercial results the outcome is minuscule. And to say that if we transferred this to an agency like NASA some miraculous change would occur is sheer nonsense. As our distinguished speaker himself has shown, NASA sponsored inventions measured by this test of pragmatic utilization of patents have turned out poorest of all, much poorer than the patents from the U. S. Defense Department. Patent yields from all government R&D effort are poor compared to any of the private, so-called R&D products in terms of inventions—that is patentable inventions, which are commercially useful.

I think that this is really a problem of confusion on the part of Senators and Representatives who do not really follow the consequences, who see vast government expenditures and equate the patent outcome from these expenditures with the outcome obtained by private corporations from their R&D which are shaped to attain the specific end, which is not true for government supplied R&D.

Therefore, I think we are to really look at the broader issues before we decide what the government patent policy should be. And if it is to be utilization—I mean patent utilization, then I think the greatest freedom given to the contractor is the best policy because in one of the Institute's studies, based on the data that the Senate Subcommittee on Patents obtained, I was able to show that the companies that get the government contracts for the various endeavors are not the best in the field in which the private corporation excels. It is possible that the reason for this is that those that are eminent in the particular field of endeavor do not want to jeopardize their patent position and therefore they keep away from government contracts at least in areas in which they are preeminent. It is the second and third line industries that pick up that particular contract.

Having stated in this broad sense that we are using (probably that we are ignoring) broad issues, I shall get into the quantitative basis on which I arrive at the conclusion that inventive flow from government supplied R&D is minuscule. The only way that I can conceive maximizing any return is to leave with the contractor, wherever possible if the contractor is interested, inventions resulting from his contract.

With respect to patent productivity from R&D expenditure, such information as we have indicates rather consistently that 12 to 13 times as many federal dollars are required in comparison to patent productivity of private R&D dollars. This is counting each patent. This ratio

was first derived by this observer partially from data compiled by Professor Watson, *et al.*¹

Watson and his associates give the aggregate number of patents that have resulted from federal R&D expenditures from 1946 through 1959 as 32,000.² They also indicate that the total R&D expenditures in this period was \$70 billion, of which \$37 billion was contributed by the government for intramural and extramural R&D. If we attribute the remaining \$33 billion all to industry and relate this amount to assigned patents issued during 1946-59 we obtain the ratio of 12 to 1. That is, for equivalent R&D dollar inputs, at least 12 times as many patents flow from company-supplied R&D expenditure as from government-supplied R&D dollars.

This global figure was confirmed by data collected by the Senate Subcommittee on Patents, Trademarks and Copyrights³ and analyzed by this commentator.⁴ The figures are summarized in Table I.

An independent confirmation of this 12 to 1 ratio is obtained by Freeman⁵ by analyzing the returns of companies producing electronic gear who responded to the Senate Subcommittee's inquiry cited in footnote 3.

This commentator is ready to admit that despite this apparent consistency one cannot be too confident with this mode of approach, though without large resources we know no other mode of approach to this vital matter.

It must be apparent to most rational people that a patent is not a unit of quantity. Therefore productivity cannot be measured through the number of patents resulting—since sometimes a single invention could prove more valuable than millions of patented inventions combined. When we consider other attributes of patented inventions in trying to measure the comparative productivity of federally financed with privately financed R&D we find the disparity becomes much greater than 12 or 13 to 1.

¹ Sanders, B. S., "What Should the Federal Government's Patent Policy Be," *IDEA*, Vol. 8, No. 2 (Summer 1964), pp. 168-198, see especially p. 172.

² Watson, D. S., Bright, H. F. and Burns, A. E., "Federal Patent Policies in Contracts for Research and Development," *PTC J. Res. & Ed. (IDEA)*, Vol. 4, No. 4 (Winter 1960), pp. 295-428, see especially p. 377.

³ *Patent Procedures of the Department of Defense*, Preliminary Report of the Subcommittee on Patents, Trademarks and Copyrights of the Committee on the Judiciary, U. S. Senate, 87th Cong., 1st Sess., pursuant to S. Res. 55 (G.P.O. 1961, Washington, D. C.).

⁴ Sanders, B. S., "Comparative Patent Yields from Government Versus Industry Supplied R&D," *IDEA*, Vol. 9, No. 1 (Spring 1965), pp. 1-23.

⁵ Freeman, C., "Research and Development in Electronic Capital Goods," *National Institute of Economic Review*, (Nov. 1965), pp. 72-73.

TABLE I

COMPARATIVE APPROXIMATE PRICE TAGS FOR PATENTS FROM FEDERALLY PROVIDED
AND INDUSTRY-SUPPLIED R&D DERIVED FROM INFORMATION SUPPLIED BY 78
COMPANIES

Source of Money	In \$1,000,000		
	Per Patent Application	Per Patent Issued	Per Patent Application Pending
Government R&D	1.792	3.702	4.235
Industry R&D	.163	.288	.575
Ratio of Gov./Ind.	11/1	13/1	7/1

The Patent Utilization Study developed by the Research Institute indicates that between 50 to 60 percent of privately financed R&D inventions which are patented are put to commercial use. The use ratio for patented inventions resulting from federally financed R&D is much lower. This was indicated for the first time by the Patent Utilization Study.

Watson, *et al.* took a sample of 298 patented inventions that had resulted from federally financed R&D. The title for these patents had been left with private contractors. A questionnaire was sent with respect to each invention to the patentee inquiring among other things whether the invention had ever been put to commercial use. With respect to commercial use, usable replies were obtained for 143 patents, and of these only in 19 was the invention said to have been used commercially—a utilization rate of 13 percent. This then is the highest proportion of privately owned patented inventions flowing from federal R&D grants that have been reported commercially used.⁶

In the report compiled by the Senate Subcommittee the contracting companies were requested, among other things, to report the patented inventions resulting from Defense Department R&D contracts to which they had title that had been put to commercial use. According to the Subcommittee this showed about 7 percent utilization.⁷ This commentator, reworking the company reports to the Subcommittee, could obtain only 5 percent or so, instead of 7.

Both the Watson, *et al.* and the Senate Subcommittee studies obtained utilization ratios for patented inventions resulting from federal R&D for which title to the patent was left with the contractor.

⁶ *Supra* footnote 2, pp. 323-324.

⁷ *Supra* footnote 2, p. 35.

In a recent study by Professor Solo⁸ of the University of Michigan, utilization ratio is given for disclosures, some of which are patented, resulting from NASA contracts. The utilization ratio for 160 disclosures (patented or otherwise) for which the Agency had waived title in consideration of a private company's request to develop the invention only seven were reported in commercial use—in fact subsequent text cuts this number to six, i.e. about 4 percent, despite the apparently highly selective nature of these disclosures.

The Solo statistics are for the years 1959-64 for waivers granted and the end of 1965⁹ as far as utilization status was concerned. A more extensive study of NASA disclosures and patents¹⁰ gives 172 disclosures through 1965, for which title was waived on behalf of private petitioners. Of these, Watson and Holman report that 21 were put to commercial use—12 percent. However, NASA itself which periodically canvasses the commercial use of these disclosures, questions some of the disclosures considered in commercial use by Watson and Holman, and obtains a utilization ratio of about 8 percent. Considering the select nature of these inventions perhaps the initial rate, 13 percent, obtained by Watson, *et al.* for inventions resulting from government R&D in which title is left with contractor was unduly high, that the true rate for such inventions lies somewhere between 5 and 10 percent.

A priori, one would expect an even lower rate of utilization for patents resulting from federal R&D in which title remains with the government. A basic study of such inventions was made by Professor Holman under the aegis of The PTC Research Institute.¹¹ The Holman study gives the commercial utilization rate of government-owned patented inventions as 10 to 15 percent based on inventor replies. This is, however, inconsistent with her own findings based on licensee returns. This likely anomaly has been pointed out by this commentator previously.¹²

If one takes the Holman returns based on licensee replies and assumes no utilization of federally owned patented inventions by any

⁸ Solo, R. A., "Patent Policy for Government-Sponsored Research and Development," *IDEA*, Vol. 10, No. 2 (Summer 1966), pp. 143-206.

⁹ *Ibid.* pp. 174-175, Table IV.

¹⁰ Watson, D. S. and Holman, M. A., "An Evaluation of the Patent Policies of the National Aeronautics and Space Administration," Prepared for the National Aeronautics and Space Administration by the Department of Economics, The George Washington University, Report of the Committee on Science and Astronautics, U.S. House of Representatives, 89th Cong., 2nd Sess., Serial U. (1966).

¹¹ Holman, M. A., "The Utilization of Government-Owned Patented Inventions," *PTC J. Res. & Ed. (IDEA)*, Vol. 7, No. 2 (Summer 1963), pp. 109-161 and No. 3 (Fall 1963), pp. 321-395.

¹² *Supra* footnote 1, pp. 176-186.

firm that is not licensed, it gives a utilization rate of about 2 percent. The comparable utilization rate of federally owned disclosures cited by Solo for NASA is much lower—1 out of 48 licensees, about half of whom responded; but only about 1 per 800 disclosures, patent application or patents. The results that Watson and Holman obtained for NASA disclosures on the basis of licensee replies is five inventions in commercial use. Related to all potentially licensable inventions this yields a percentage below one. Thus in all probability, unless one assumes appreciable commercial use of federally owned inventions whether patented or not, the utilization rate by licensees when related to the total universe would be 1 to 2 percent for inventions owned by government which have resulted from government-supplied R&D.

Such fragmentary information on monetary returns from the commercial use of these government generated inventions indicates (as we have) with rare exception very small returns. These returns are negligible compared with returns reported in the Patent Utilization Study. Putting these differentials together, one is justified in concluding that even the assertion of one privately spent R&D dollar being better than \$1000 federally supplied R&D in terms of production of useful patented or patentable inventions is flattering the government. Patentwise, government R&D expenditures are unproductive and sterile. The question remains, however, whether number and quality of patented inventions resulting from federally financed R&D are proper criteria by which to appraise the merits of federal R&D outlays vis-à-vis private R&D outlays.

MODERATOR DERR: We are running overtime, I am afraid. I apologize for interrupting.

DR. SANDERS: That is all right.

MODERATOR DERR: I am sure my three speakers think we are pressurists and martinets. I apologize to all three of them. I am going in the time-hallowed tradition of legislative debate to yield myself two minutes since I happen to be the only industry speaker on this platform. I don't presume to speak for all industry. I do represent what I think is an important segment in industry in the machinery industry and allied industrial equipment manufacturing companies.

Number one, is it desirable to have legislation or should we permit the Kennedy Memorandum to continue? I think our answer would be yes. It probably would be desirable.

Number two, if it is desirable to have legislation, is the McClellan Bill, S. 1809, that we have been discussing here this morning, an appropriate piece of such legislation and with the qualification I shall mention as my third point? And the answer is yes.

The qualification goes to the omission in S. 1809 of any reference to background data. That is to say, information patented or unpatented which is brought to the research and development contract by the contractor. No reference is made to this in the bill. We discovered many of our companies are now being badgered if I may use such a word, and are having the awards of contracts being held out as bait in return for the demand that they surrender forthwith the root and branch of all background data. This, I think, is unfortunate. Unfortunately, probably legislation is going to be required to more clearly define the relative status of the parties with reference to background.

So much for Derr.

Panel Discussion and Question Period

Now back to the questions from the floor:

"Dr. Solo, you suggest that patent information be fed into government information disseminating systems. Isn't this already being done by the abstracting of the information which is set forth in the progress and final reports to the government? That is, isn't the invention already described in the reports?"

DR. SOLO: Within my very limited knowledge of this matter, I am not entirely cognizant, and I must certainly be unaware of some uses made of patents. The patent is a bundle of information. If I think in terms, say, of the NASA information dissemination system, with its computerized data-searching, its systematic dissemination of microfiche research reports and its attempt to generally make available for industry and for universities the information which is produced through its own research and through aero-space research throughout the world, I find that the bundle of information contained in NASA patents is not fed through this information system at all, but moves on quite a different plane. I think that this is also true for the other great public agencies inasmuch as they attempt systematically to promote the general use of research-based information.

MODERATOR DERR: Thank you.

I have a question for Mr. Anderson: "If the Patent Reform Act of 1967 were to become law, couldn't the government achieve essentially all its purposes by requiring publication instead of a filing of patent

applications on inventions falling within the title philosophy?" Is that question understood, Mr. Anderson?

MR. ANDERSON: It could, if you don't believe in a patent system. If you believe in a patent system, how are you going to say you are going to exclude a large body of inventions that result from R&D government funding and secure no patents on them?

I would like to add, in regard to Dr. Solo's remarks about patents not getting into literature, we in AEC try to assure that the patents get into the technical literature. All of us in the chemical field are familiar with the chemical patents being published in "Chemical Abstracts." I think AEC and several other government departments today are seeing to it, that even though the information may be in technical contract reports, that it is separately fed into one or more information systems in the form of the patent or an abstract thereof after issue.

MODERATOR DERR: Could I make a comment which will end with a question? Exercising the prerogative of the Chair just a moment, both of our first two speakers, Mr. Anderson and Dr. Solo referred, I think quite correctly, to the primary question of what is the challenge. What is this challenge we are attempting to meet? They defined it somewhat differently. I want to go specifically to Mr. Anderson's observation that he understands the challenge of our search for a government patent policy to be the maximum utilization of new technological information coming out of R&D. Am I stating this correctly, Mr. Anderson?

MR. ANDERSON: I think that is correct.

MODERATOR DERR: Did I understand you to conclude S. 1809 would in your judgment reasonably accomplish your objective?

MR. ANDERSON: I think it would reasonably do so.

MODERATOR DERR: Would you like to expatiate on that just a moment? I think this is a central question, perhaps the central question.

MR. ANDERSON: Why I think so?

MODERATOR DERR: Yes, if you please.

MR. ANDERSON: Well, if the contractor acquires the invention, promotes it, and utilizes it, the invention gets into the economy, the technology gets in the public use, and we as consumers can buy the products that are the fruits thereof. If the contractor does nothing, then there is a reserve authority to see that it is utilized to the best possible extent. Now it must be recognized that many of these inventions are far ahead of their day so that utilization may be sometime in the future. I take as an example, Dr. Fermi's 1940 patent on reactor technology. No commercial reactors came into being until

many years later. This is true as to much of the basic advance technology. On the other hand, where the government has such inventions in its portfolio, or the contractor owns the same and neither does anything, the McClellan Bill gives enough flexibility to each agency to administer within the program and mission of the maximum use as the goal. The government would be given authority to exclusively license for limited periods. This would create the climate for employment of risk or venture capital that may be needed to promote use for limited periods of time. I recognize there are some fundamental things behind the rationale—as Dr. Solo says, I am looking at it from a patent lawyer's point of view—i.e., we start with a patent system, then we must consider what is the purpose of the system. Also I think the McClellan Bill sets the stage for the creative idea because within its framework there is the recognition of individual inventors and the possibility of according special consideration to an inventor. This is the basis on which I feel that the bill goes far in creating the right climate for equitable division of rights.

I don't think it is a perfect answer, but I believe it would go far to establish a base for positive action in a field that has been for the last 20 years fraught with emotional discussions.

MODERATOR DERR: Thank you very much.

Gentlemen, I apologize to my panel again for having to cut them off so abruptly. We are overtime and common courtesy to those who follow demands that we quit. I suggest a round of applause for the splendid members of our panel. (Applause)

MODERATOR DERR: Thank you very much.

Part IV—Will Proposed Legislation on Copyrights Meet the Challenge?

DIRECTOR L. JAMES HARRIS: Thank you very much, Mr. Derr.

The subject of copyrights is very much on people's minds today. The imminent enactment of the revision of copyright laws on which many have worked long and hard for quite a few years makes this next panel particularly timely. This next part, Part IV, will complete the Second Session of the Conference.

Copyright experts will seek in this next part to determine whether

the proposed legislation on copyrights meets the challenge of improving the system for greater social progress.

The Moderator for this session is George D. Cary, Deputy Register of Copyrights, Copyright Office, Library of Congress.

He has been closely associated with the Institute for some time. He is also a Professorial Lecturer in Law at The National Law Center of The George Washington University.

It gives me great pleasure to introduce Mr. George Cary.

MODERATOR GEORGE D. CARY: Thank you, Lou.

The question as you see on your program is, will the proposed copyright law meet the challenge? I think there is a threshold question to any problem. The threshold question here, of course, is will the bill get through the Congress? So by way of giving you a little background into this bill, I would like to say on April 11, the House passed the bill with some amendments and sent it to the Senate. During that period, the Senate was holding hearings and they recently concluded them. So we are going to discuss this morning three of the challenges that have been raised really in recent years or recent months. The first one that we are going to discuss is a very unique and quite fascinating one to me. It isn't really new in a historical sense. But it is new in the general thinking, I believe, of most people. I am referring here to the problem of the protection of performers in their recorded performances.

During the House hearings in 1965, there was very little discussion of this problem. It really arose in the Senate. This was due to the fact the well-known band leader, Stan Kenton had organized a group of musicians to get together and try to do something about getting some protection for their performances. The musicians feel that with the advent of radio and television they have been denied to a great extent certain amounts of their living because in the early days of radio, every radio station had some sort of musical group. Now as you know, recordings are the main stay of most radio stations. So the musician naturally feels he has been cut out of a source of income. The apparent way to equalize the situation is to try to get some protection for his performances and his records.

Any of you who might have been at the Senate hearings I am sure will long remember the very interesting performance that Julie London gave when she sang the Mickey Mouse Song, to illustrate her point that it isn't so much the song, itself, but it is the way it is performed. I must admit that hers was unique.

We have with us today a man who is going to discuss this aspect of

the bill. He is a very well qualified New York attorney who is not only an expert in trademarks, unfair competition, but has long been associated with the copyright field as well, having served on the panel of consultants in connection with the copyright bill. I give you Mr. Sidney A. Diamond.

SIDNEY A. DIAMOND

Thank you, George.

Ladies and gentlemen, my comments will be directed at the topic of public performance rights in sound recordings which, in the context of some of the major problems dealt with at this Conference, may seem to be a very narrow subject indeed. However, it does raise important social and economic questions which the current copyright revision program has not yet resolved. Specifically, the problems are those of the performing artists and of the entrepreneurs who produce and distribute their works in recorded form.

Two basic facts must be kept in mind as a prerequisite for an understanding of this topic. In the first place, we are concerned almost entirely with music, and music differs from other types of copyrightable material in that its appeal is almost exclusively to the ear rather than to the eye. Putting it another way, music is meaningful to the vast majority of the population only in terms of its performance, and this, of course, requires the intervention of performing artists to make audible the concepts previously expressed by the composer in the form of notes on the printed or manuscript page.

The second basic fact derives from the electronic advances of the 20th Century which have had so profound an impact on the entire field of communications, and therefore of copyright. Most people today hear music only in recorded form. Live public performances now are the exception rather than the rule. The performance takes place in a studio and is fixed in a record from which it can be reproduced at the convenience of the user, who, in most cases, is a broadcasting station or some other commercial enterprise, as distinguished from the individual placing a disk on a record player in his own home.

The problem with which I am concerned arises from the simple fact that the present copyright act makes no provision whatever for any

compensation for the commercial exploitation of the sound recording. If the musical composition embodied in the record is itself a copyrighted work, the public performance of that music for profit requires payment to its copyright proprietor. I assume most persons present today are familiar with the operations of ASCAP and similar performing rights societies which issue the necessary licenses on a blanket basis, so that the user, whether it be a broadcasting station, a dance-hall that plays records rather than employing a live band, et cetera, does pay compensation to the music publisher and the composer for the use of the tunes themselves. However, aside from the nominal cost of purchasing the phonograph record which is wholly out of proportion to the cost of engaging live performing artists, no compensation need be paid for the use of the performance embodied in the record.

It is worth pausing for a moment to consider the series of almost accidental events which led to the concentration of this problem in the field of phonograph records. There are two principal methods by which musical performances can be fixed in tangible form for subsequent use. One is the sound track accompanying a motion picture, and the other is a phonograph record.

In 1909, when the last copyright revision was enacted, no particular concern was expressed about motion pictures, although they already had been invented. In 1912, however, Section 5 of the Act was amended specifically to add "motion picture photoplays," and "motion pictures other than photoplays" to the list of classifications of works for registration purposes.

Of course there were no sound movies at that time except for some early Edison experiments in combining his talking machine with a motion picture projector. The talkies as we know them today did not arrive until the late 1920's.

As sound films became established, producers simply deposited them in the Copyright Office along with the usual application for the registration of a claim to copyright, and such motion pictures are accepted regularly today with the sound track, of course, an integral part of the film. So far as I know, there never has been a challenge to the assumption that the copyright of a sound motion picture covers the sound track as well as the visual portion of the film. The question is not likely to arise in practice because the film indeed is an integral whole. Incidentally, the Copyright Office now accepts videotape recordings for deposit as well as the conventional celluloid film, even though videotape is not intelligible to the eye at all.

The position of the phonograph record under existing copyright

legislation is vastly different. There was concern about sound recordings at the time of the last general revision in 1909, but the problems then were discussed primarily in terms of perforated player piano rolls. The Act of 1909 refers to mechanical reproductions of musical works in language clearly broad enough to embrace phonograph records as well as player piano rolls, or, for that matter, sound recordings in the form of tape, wire or any other mechanical medium. The significant point is that the Act of 1909 does not protect the sound recording as such; it merely provides for control over mechanical reproductions, by the proprietor of the copyright in the musical work which is the subject of the recorded performance.

In other words, a phonograph record can infringe a musical copyright; but there is nothing in the Act to protect the record itself against infringement by unauthorized duplication or public performance.

The copyright revision bill that is presently under consideration would remove any lingering doubts about the protection accorded to the sound track of a motion picture. The text of the bill makes it explicit that the accompanying sounds are part of the total audio-visual work protected by the statutory copyright under the designation of a "motion picture."

With respect to other types of sound recordings—that is, the conventional phonograph record in disk form, or a tape recording or the like—the revision bill takes a small step forward. Sound recordings are recognized as independently protectable works and they would be covered by copyright under the present version of the bill. However, this is an extremely limited form of copyright which protects only against unauthorized duplication. The right to control performances of the sound recordings is specifically denied by the bill. In this respect, the bill puts sound recordings in a different, less favored, category than every other type of work which is capable of performance.

The question of a performing right in sound recordings has been mentioned by the Register of Copyrights in his report. His most recent statement is to the effect that this is an extremely controversial issue which ought to be deferred. Tentative statements on the subject were made during the House Subcommittee Hearings in 1965. The House Committee report indicated that there might be validity in the position taken by the proponents of such a right, but suggested that the topic should be left to some future Congress to resolve. Specific proposals were made before the Senate Judiciary Subcommittee at the 1967 hearings, and an amendment has been submitted by Senator

Williams of New Jersey that would provide for the payment of a reasonable royalty for the public performance of sound recordings, with the proceeds to be divided equally between the phonograph record companies and the performing artists. What chance this proposal has of enactment is difficult to predict at the moment. Some indication no doubt will be forthcoming in the report of the Senate Judiciary Subcommittee on the pending bill, but this is not expected to be available for some months yet.

Why is this problem worthy of consideration? From one point of view, the increased mechanization of musical performances has progressively reduced the opportunities for employment of live musicians. Society in general has a real interest in preserving the profession of performing music because, as already indicated, it is only through the medium of a performance that the musical literature takes on any meaning for the population in general. Even among professional musicians, only a relative handful can extract the full meaning from a score merely by reading it; music must be heard.

From another viewpoint, it is simply unfair to permit user industries to continue to take what amounts to a free ride on the products of the phonograph record manufacturer. The generally accepted estimate is that 80 percent of all radio broadcasting time in the United States of America is occupied with sound recordings. Juke boxes obviously rely 100 percent on phonograph records as their basic source of revenue. Numerous other commercial enterprises, which probably could not afford to pay the salaries of live musicians, much less afford to engage the leading performers whose recorded performances they use, derive commercial benefits from the reproduction of sound recordings as a routine part of their business. The nominal cost of the record itself is completely out of proportion to the income generated by the exploitation of these recordings by their commercial users.

It is a proper part of a consideration of this subject to take into account the fact that the phonograph record industry is one of high risk and low return. Many recordings, especially in the classical field, never earn back their initial costs. There is an enormous amount of competition among phonograph record manufacturers, and this is an industry in which few consumers pay list price for the product.

Both the phonograph record industry and the performing artists therefore have taken the position that the proposed new copyright revision will not meet the social needs generated by recent technological advances unless a performing right in sound recordings is included in the statute.

Looking at this problem from the viewpoint of comparative law, the

question is an old one, and it has been resolved in favor of protection for the sound recording in most countries of the free world outside the United States. The foreign experience is relevant not only to a consideration of what would be a proper solution in this country, but also because foreign countries frequently apply the principle of reciprocity. Accordingly, although recordings originating in the United States enjoy immense popularity and correspondingly large sales and other uses in foreign countries, payment for the public performance of recordings of U.S. origin in a foreign country may be withheld unless there is a reciprocal right granted under U.S. law, by which the original producer of a foreign recording can secure compensation for the commercial performance of that recording here in the United States.

In England, sound recordings have been protected by full statutory copyright ever since the Act of 1911, and this right continues under the British revision of 1956. A sound recording there is an independent copyrighted work enjoying all of the same types of benefits as a musical composition, specifically including the right of public performance. As distinguished from this system of absolute copyright, the laws of some other countries provide for the payment of an equitable remuneration when a sound recording is used for broadcasting or some other public performance purpose. In other words, there is no right to prohibit its use, but the broadcaster or other company performing the record must pay for the privilege. That is the type of proposal which was made before the Senate Judiciary Subcommittee by the record manufacturers and performing artists of the United States earlier this year.

In addition to national legislation in a large number of foreign countries, there is an international treaty, generally referred to by its short title of the Neighboring Rights Convention, which sets up minimum standards for the protection of sound recordings and related rights. The United States of America is not a member of this Convention because our domestic law does not meet these minimum standards, since, as I have explained, there is no protection for sound recordings at all under our present copyright act.

The trend around the world seems clearly to be in the direction of recognizing public performance rights in sound recordings as part of the overall copyright system of the particular country involved, and as part of its international copyright relations. It seems fairly obvious that the right time to consider this question in the United States is now, when our copyright act is undergoing its first general revision in almost 60 years. (Applause)

MODERATOR CARY: Thank you very much, Sidney, for not only a very precise statement of the problem, but adherence to our time schedule.

Your program will show the next speaker who was to be with us—I must say that we are going to have to postpone that. He has been unavoidably detained. We will go to the the third speaker listed on the program. This speaker will discuss another very interesting subject over which much controversy rages. Unlike the problem of performers' rights, this was the subject of quite heated discussions in the House hearings and the House Committee actually came out with a proposed solution. The original bill as introduced made the community antenna television systems completely liable for copyright in making television programs available in the homes of subscribers to the CATV system.

I am sure you all are familiar with what a CATV system is. So I shall not dwell upon that.

However, when this bill came up for debate on the House floor back in April, there arose on the floor a sort of debate on jurisdiction. The Judiciary Committee, which was shepherding the bill, was challenged by members of the Interstate and Foreign Commerce Committee with respect to the CATV provision because they contended that some aspects of this provision amounted to a regulation of broadcasting, and therefore fell within the province of their committee. So in the melee that ensued, what happened was that the CATV provision in the bill, Section 111, was completely excised. Well, what was this provision? This was a compromise which the House Committee had devised to really do three things. It is a very complex provision. It is probably the most difficult provision of the bill in the first place. I don't intend to go into it here. But suffice it to say that the Committee was convinced that there was a certain area where CATV operations did not at all adversely affect the copyright proprietors. In this particular area, the Committee felt there should be no copyright liability. There was, on the other hand, another area which the Committee was convinced did adversely affect the copyright proprietors' interests. They felt that here there should be full liability. In other words, if the CATV operator wanted to use a particular program in that area, he had to negotiate.

There was a third area, which is commonly called the gray area, in which the copyright proprietor's interest was only indirectly affected according to the Committee. And here the solution was to provide a sort of compulsory license. In other words, the CATV system could use the material upon payment of some sort of a compulsory license fee.

Well, this is the provision that was deleted from the bill in April. When the bill, H.R. 2512, arrived in the Senate, if you have a copy of

that, you will notice that after Section 110, the next section is 112. There is no Section 111. However, in the Senate bill Section 111 still exists. It is this particular problem, what to do about the CATV liability that is going to be the subject of our discussion this morning.

One of the aspects of this, I might add, is that there was pending a copyright infringement suit under the present law by *United Artists* against *Fortnightly Television*, a CATV system in West Virginia. The decision was handed down in New York in the District Court shortly after the House Committee's report was issued last year. In effect, this decision said that CATV was completely liable under the existing law. Just a few short weeks ago the Second Circuit upheld completely the lower court's opinion.

So it is interesting to speculate that under the bill that was passed by the House, CATV systems are now in the same position as if the original bill had been passed. In other words, it is completely liable for any programs that it transmits. However, it seems quite clear, to me anyway, that this will not stand when the Senate completes its action on the bill. So we are going to have with us this morning a man who has been involved in this problem for a long time and is an expert. He is very adequately equipped to inform you of some of the problems that come up in this area.

Mr. Jennes is a member of the Covington and Burling law firm here in town. He has represented the Association of Maximum Service Telecasters that I understand comprises a group of approximately 160 large television stations around the country which transmit at the maximum power permitted by the FCC. Without further ado, I give you Mr. Ernest Jennes.

ERNEST W. JENNES

Thank you, Mr. Cary.

"Will the proposed legislation on copyrights meet the challenge of CATV?"

Since I am not sure whether we are talking about the bill that was reported out by the House Committee or the bill that passed the House of Representatives or the bill that is now pending before the Senate as a Senate bill, or the bills that are being worked on behind the scenes, about which I know nothing, I really can't answer that

question. I don't think anybody knows whether the proposed legislation will meet the challenge of CATV.

Let me give you some thoughts, if I may, on CATV and its relationship to copyright.

CATV was a sleeper in the copyright revision program. For the first 10 years of the revision project, there was virtually no attention given to the copyright implications of CATV. In contrast, when the House Judiciary Committee reported the revision bill in October 1966, the CATV section, Section 111, to which Mr. Cary referred, was the third longest and certainly the most complicated section in the entire bill. The dispute over CATV on the House floor, together with the dispute on jukeboxes, came near to sinking the entire copyright revision bill.

Now, in fairness to the Registrar and his advisers, it must be noted that the increase in the number of words devoted to CATV, in the draft bill, and in the related literature, has been proportional in a rough way to the increase in the number of CATV systems and to the accelerated change in the nature of CATV.

CATV was originated as a device to bring television stations to, or improve their signals in, villages and towns which do not receive good television reception over the air, either because of rough terrain or remoteness from television stations.

CATV did this by a sophisticated system of obtaining television station signals, amplifying them and transmitting them by wire for a charge to those who cared to pay for their distribution. This kind of CATV really presented no significant copyright problems, a proposition that was rather thoroughly demonstrated by the fact that this type of CATV operated for a number of years, and there were never any efforts to enforce copyright against it.

Recently, however, the focus of CATV action has changed from small, remote towns to large communities, indeed, large cities which receive a full complement of television service off the air. In addition to carrying signals of the nearest television stations, these new CATV stations import and distribute signals from stations hundreds or thousands of miles away. From three-, four-, or five-channel improvement of signal systems, they have now developed into 12-channel systems that change the usual patterns of off-the-air viewing. Moreover, many of these CATV systems propose to originate their own live programs and to show movies and other programs, the same sort of thing that regular television stations do and some have already started to do this.

So it is readily apparent that this new form of CATV does more than perform a simple master antenna function for its subscribers.

Let me emphasize that CATV does present copyright problems. I say this because there are some who contend that CATV is a problem solely for the Federal Communications Commission and that the only restriction on CATV use of copyrighted material should be the restrictions prescribed by the FCC. This approach, I suggest, is wrong on at least four counts.

In the first place, CATV sells programs for a price. Without programs it would have nothing to offer. Yet it does not pay a cent for any of these programs. It is only fair that the copyright proprietor should share in the proceeds from the exploitation of his work.

Second, CATV competes with other users of the same copyrighted works by carrying outside stations; CATV competes with the local and area television stations for audience. The local and area stations have to go into the marketplace to bargain with the copyright licensors for performance rights just as the movie theater or any other of the mass media. It is only fair that CATV should do likewise.

Third, CATV can destroy exclusivity in copyrighted work. It is the exclusiveness of the copyright grant that enables the copyright proprietor to govern the exploitation of his work. Experience has demonstrated generally the best way for the copyright proprietor to exploit the copyright television rights for his work is by granting exclusive licenses in the separate television markets. Unless it is restricted by law CATV would deprive the copyright proprietor of the ability to control the exposure of his work. When CATV moves television signals from one market into another, those signals carry copyrighted works, and the exclusive licensee of the television rights in the second market finds that the work to which he has exclusive rights has already been disclosed to his audience; it is being shown in competition with him.

Fourth, CATV sometimes degrades the quality of the television signals it carries, thereby damaging the reputation and value of copyrighted works.

These are all proper copyright interests. They should be recognized in the general revision of the copyright law.

I might say also that up to now the debate on CATV has been limited to its relationship to the type of program fare that one sees over television stations. But the implications of CATV in the future relate to the carriage of any and all kinds of copyrighted materials since over these CATV channels any and all forms of information can be distributed by closed circuit. If you are talking about implications of CATV for copyright and the copyright proprietors, you are talking about virtually every kind of copyrightable information.

It is clear then, at least it seems to me, that CATV must be provided

for in any copyright revision bill. The House in passing the copyright revision bill, as Mr. Cary said, in April deleted the special Section 111 which dealt with CATV. A lot of reasons were given for that deletion. The standard reason is the one which Mr. Cary gave us which is it was the result of a jurisdictional dispute between the Judiciary Committee and the Commerce Committee.

Without going into that issue on the merits, the important thing to note is that the deletion of Section 111 leaves CATV operators fully subject to copyright under the bill. Hence it would leave the matter of liability for infringements unchanged from present law. This is by no means an intolerable result, as a strong case can be made for the proposition that there should be no special treatment for CATV. In practice, I think it would have little or no effect on those systems which perform simply as a master antenna, that is, those systems which merely improve reception of local signals within their own home markets or take signals to small and remote communities. Nor would there likely be any impact on CATV operating outside of existing or future television markets.

Nevertheless, this Section 111 with its special and favorable treatment of CATV does have some value. It has some value to the CATV people because it provides immunity to the extent that signals are carried within the normal service area of the television station. It provides special and favorable treatment under other circumstances I do not have time to discuss this morning.

Enacted with certain technical but important clarifying amendments, it could provide a workable accommodation of the relationship among the copyright proprietors, the broadcasters and the CATV operators.

A great deal of the attack on this compromise has focused on its provisions dwelling with so-called local originations by CATV. These local originations are essentially nonbroadcast programs which are originated by the CATV system and distributed over one of its channels on a closed circuit basis to CATV subscribers, either for additional charge or as part of the service covered by a regular monthly fee.

The word "local" is somewhat of a misnomer since a number of CATV systems could be interconnected for simultaneous transmission of programs or a film.

There should be no dispute as to two points often misunderstood. First, CATV nonbroadcast originations should be fully subject to copyright. I haven't heard anyone quarrel with that proposition. Secondly, there is nothing in this compromise provision, Section 111,

that would regulate or prohibit such originations. Rather the issue is whether the CATV should receive special exemptions for distribution of copyright programs broadcast by television stations while engaged in a form of pay television. Very few householders would subscribe to CATV service if all it offered were local originations. A number of home subscription tests of that kind have been made. None has been financially successful. But when a CATV system offers its subscribers both broadcast signals and, in addition, its own originations, it has a very high prospect for financial success. It is really a form of hybrid pay television which is feeding on the product of regular broadcast television.

So the issue here is whether CATV should be given special concessions in the use of broadcast signals when the signals are being used as the economic bases for the distribution of programs which compete for a viewing audience with these same broadcast signals.

The rationale for the special treatment for CATV's distribution of broadcast signals is that in carrying these signals it is serving as sort of a master antenna to deliver television signals from local stations that the home subscriber could himself receive in any event. When signals are brought over distances of hundreds of miles, this rationale rather escapes me. But in my opinion any such justification is completely vitiated when CATV uses its regular CATV operations as a spring-board to get into the program origination field.

To summarize, I think that CATV has too great an impact on copyright proprietors, present and potential, and their licenses, to be ignored in the copyright revision bill.

CATV transmission is clearly a public performance. It should be fully subject to the copyright bill. However, life being what it is, some compromise seems inevitable. Section 111 seems to be a compromise among the various public interests involved, although it does require, as I indicated, some clarifications and some technical amendments. It does offer an opportunity for accommodating these various interests.

Thank you. (Applause)

MODERATOR CARY: While you might be writing your questions and since I see that our other scheduled speaker apparently is still in the state of unavoidable detention, I am going to exercise the same prerogative Mr. Derr did and say a few words about the subject that he was going to expound upon. I am not going to substitute for him, because I am not capable of doing that. Dr. Licklider is a scientist, scholar, and research engineer. He could have told you an awful lot

about the subject on which he was going to speak. I know nothing about it. But I will give you some general observations about the problem.

The problem of which I speak is the problem of the utilization of copyrighted materials in information data and retrieval systems. I am going to use a shorthand word, "computer," instead of that long word though there are many people who will tell me that you cannot define what a computer is. I do not intend to get into that argument here. For shorthand purposes, the real problem that has become involved in this particular area is whether or not the utilization of copyrighted material in a computer—that is at the input stage—whether that constitutes a copyright infringement.

Now the House report takes the position that in all probability the present law would consider that an infringement, and the Committee merely continued the status quo. Now why? The reason is that during the House hearings very few people had spoken much about this computer problem. I believe there were only two people who testified in this connection. So after the House had concluded its hearings, people had become quite exorcized about this. All of a sudden it was blown up into a rather monumental problem.

Much correspondence and visitation took place as far as the Committee was concerned. But the Committee I think, took the position that since they had not received any testimony to any great extent in this area, they were not in the position to attempt any legislative solutions to these alleged problems. So what the Committee in effect did was to say that "we will let the bill stand." Let it stay in the same situation it is today. We are going to ask the Register of Copyrights to meet with the various parties and advise us of any ways in which the matter can be resolved. In other words, see what the problems are, relay them, then perhaps the Committee will take separate action at a later date.

Well, when the hearings got over to the Senate, the people who had become involved in this—they were primarily in the educational field—had their say before the Senate Subcommittee.

Now what is their problem? The problem I think is essentially this. They envisage that in the future—I use the word "future" without any adjective because whether it is next year or 10 years from now and nobody seems to know, they say in the future—school systems are going to have computers and the teachers are just going to be able to press buttons and get all the material they need in substantially every class, and furthermore, the students themselves, are going to be able to sit there and punch buttons and get answers to any inquiries they may

have, et cetera. If educators must obtain permission to input copyrighted materials into their computers, they believe such time-consuming procedures would seriously affect education.

In other words, computers are going to take over educational systems in a big way. If you copyright people try to hinder this, you are just against motherhood. So they went to the Senate and said they wanted an exemption. This is a normal reaction, I think. Anybody who feels he is going to get hurt wants to be "included out." This was the problem of the educators.

There was another group of educators, some of you may be aware of the organization which is called "EDUCOM." This is a group of universities which have banded together in an attempt to consider the possibilities of the establishment of interconnected libraries by means of computers. They envisage, if I understand them correctly, in the future, for example, that a student at Stanford University who needs a certain book that turns out to be in the Harvard Library, will be able to punch a button and either he will get a copy of this material he needs or it will be flashed on a cathode ray tube and he can see the pages and make his notations. Now you can see why these people were bothered by the problem of input. Because if the computer was going to be used in this manner, they were faced with the problem of obtaining permissions before inputting all these copyrighted books.

They took the position that this should not be a copyright infringement because when teachers or librarians need the material they need it in a hurry and would not have time to get permission. For example, the school teacher, if she wanted to make a transparency of a map illustrating a certain development in the war in the Far East for her class that day, could not sit down and write a publisher in New York and wait three weeks for permission. The college, universities, the EDUCOM group felt they needed to have access to all this material in their interconnected system and payment for use could be made after the output stage.

This is but one aspect of it. The authors and publishers felt they should have the right to control the input, because if they did not, the input is liable to get lost. They might not ever know it is in there, and they could not collect anything when it was utilized.

I should add that those people who felt that input should be free, seemed to be unanimous in their expressions that there was no doubt about the copyright liability of the output. Whatever was used was strictly a copyright matter and they would be willing to pay for it. They did not want to have to pay for the input. This is the problem and Dr. Licklider could, I think, have enlightened you on the

methods, the capabilities, and potentialities of computers in this area.

Both sides of the dispute, if I may call it that, admitted in the hearings in the Senate that they were talking about something that they really did not know too much about. In other words, the problems that they were thinking about were not going to happen tomorrow. It might be five years, it might be 10 years before they occurred. But there is this natural fear if you are going to get hurt, as I say, you want to be "included out." This is why they were there.

Now of late several government agencies have gotten into the picture. Some of the government agencies that utilize computers seem to feel that if this copyright bill does provide that permission must be obtained before they could input this material in their computers, this will interfere with some of the operations of these particular agencies in the scientific and technical areas especially. So they have requested of Senator McClellan permission to reopen the hearings at least for one day so they can come forward and make their pitch on this point. I understand that the Senator has agreed to do this at some yet unidentified date.

Now all of this controversy about computers must be very confusing to the Senators. I am sure it is confusing to most people. There is considerable talk by all parties concerned that maybe one way to solve this problem is to have a study commission created and let them study this matter for a few years and actually test it out and see just what the problems are, then report back to the Committee so that it could determine whether the newly enacted statute by then needs any repairs. If so, they can operate on it at that time. In this connection, Senator McClellan has decided to hold a meeting—it is not a hearing, it is just a meeting of interested parties—at the end of July at which the problems of the scope, size and powers of such a commission will be discussed.

Well, this about all the information I care to expound upon at this point. So I will now go forward and read some of the questions.

Panel Discussion and Question Period

The first question I have, "What other copyright problems that are still unresolved in the proposed copyright bills are likely to delay passage or lead to further compromise?"

Well, there is also the perennial jukebox problem. Those of you who are unfamiliar with it, it is briefly this, that as Mr. Diamond has indicated, the jukebox operator utilizes copyrighted material which is embodied in phonograph records—this is their stock in trade—but unlike other users of copyrighted material, they have never had to pay any royalties for that use. This is because of a rather odd exemption, if you want to call it that, in the 1909 Act. Now the origin of that is rather dim in the past and no one really knows what it means. But its practical effect is that jukebox operators have not had to pay any performance royalties. This naturally is a source of disappointment and frustration to the owners of the copyrights of those musical compositions which are performed by means of such machines. They have been for many years trying to get this removed.

In the bill there was a provision to take care of the jukebox problem, but on the House floor in April, this matter was settled a little differently than had been anticipated. The net result was that the jukebox operators under the bill as passed by the House will have to pay the sum of \$8.00 a year per box for the privilege of performing the songs embodied on their records. Under the provisions of the amended bill, this is to be paid to the Register of the Copyrights who is sort of a passive trustee as the bill says. He must hold this, then once a year he turns it over to a court. A court will then decide who gets this. We haven't yet heard whether the administrative officer of the federal courts objected to this. At least that is in the bill.

Now the \$8.00 per year per box is \$8.00 more than the copyright proprietors get now. But I don't think it satisfies the collection societies because they originally had been thinking in terms of about \$30.00 a year, and had finally come down to \$20.00; they thought that was the rock bottom figure to have to take, and to have to take \$8.00, I imagine must cause them to swallow rather hard.

Whether they are going to try to get this rate changed I do not know. But there is one aspect of the bill that the Copyright Office is quite interested in. Under the bill the Register has the duty of licensing all the jukeboxes every year. This is for purposes of identification, so the societies can check and see whether these fellows have declared themselves. Well, under the bill, this annual licensing must take place in the month of January. It must be done within 10 days following the receipt of the application. So as a practical problem, that means we are going to receive 500,000 applications, and we are going to have to handle them in 10 days. It obviously is a physical impossibility with our present staff. I am sure we would not be able to hire any temporary staff right after the Christmas holidays.

We are hoping for some change in this area. There is another matter still unresolved and that is the problem of the so-called compulsory license of phonograph records. At present, as you may know, a phonograph record may be made by anyone; after the first use of that record by the proprietor, upon payment of two cents a record or side, or piece, whatever you want to call it, royalty. Without going into the intricacies of this problem, generally speaking the bill had originally raised this statutory license royalty from two cents to three cents. But the phonograph record companies had presented quite a bit of testimony in the House that this would be very detrimental to them. As Mr. Diamond has indicated to you, there is a lot of loss involved in this rather fantastic business. While many companies sell millions of dollars worth of records, all is not profit. There are many large ramifications of supply and demand, as it were. In general, the record industry rather convinced the Committee that maybe three cents was a little too much. So the Committee came out with two and a half cents.

Now in the Senate, they have appeared again and said this is still too much; they would still like to have it down to two cents. So here is one of the problems that is yet unresolved.

I think that the compulsory license, the jukebox, the computers, CATV, the performers is enough to give you an idea that this is not by any means a simple bill.

Here is a question for Mr. Diamond.

"Do you think that the proposed Senator McClellan Bill, the Unfair Competition Act of 1967, broadening federal jurisdiction on a spectrum of unfair competition practices, will fill in an existing gap in copyright protection, such as misappropriation of—it looks like recorded performances—that is the records themselves, not now protected?"

It says "See Section 43 (a)," it looks like.

Sidney?

MR. DIAMOND: The answer is "yes." However, I suppose you would like to hear a little more from me about it than just that.

This question opens up a rather difficult area which has caused some concern as a result of the Supreme Court decisions in *Sears* and *Compco*. We have had cases in New York State, for example, both before and after *Sears* and *Compco*, which dealt with the specific problem of the unauthorized duplication of sound recordings. It is not very difficult or expensive to go into the phonograph record business, because you don't have to have your own facilities; they are available on a contract basis. A company called "Greatest Records, Inc." took some recordings of The Beatles and simply rerecorded them without

giving the names of the people, but with drawings on the cover of some shaggy-haired persons—in case somebody missed the point—and put out its own record.

This was stopped. This type of activity has been stopped under New York State law, both before and after *Sears* and *Compco*. Some very serious questions have been raised about whether this is the type of activity which is merely copying, and therefore would be exempt from any liability under a strict reading of *Sears* and *Compco*.

I will take it one step further. There is a famous footnote in *Sears* which points out that common law copyright remains unaffected because the copyright statute itself so provides. And if what is happening in the unauthorized duplication of a sound recording is an infringement of a common law copyright, then presumably the state still has power to enjoin the defendant under *Sears* and *Compco*. If what the defendant is doing is tantamount to “misappropriation” of “quasi-property” of another, to borrow the language of the Supreme Court in the *International News Service* case, there is an open question.

There is an article in the current issue of the *Bulletin of the Copyright Society* which takes the position that New York State is going too far, in the light of *Sears* and *Compco*, when it continues to enforce its theory of misappropriation in cases of this nature.

To go back to the beginning of the question, the McClellan Bill would enact the misappropriation doctrine into federal unfair competition law. The text of the subsection referred to in the question is deliberately framed in the light of the language of the Supreme Court decision in *International News Service v. Associated Press*, which, according to the First Circuit, was overruled by *Sears* and *Compco*. Again, nobody knows for sure.

If the McClellan Bill were passed, there certainly would be on its face a cause of action under amended Section 43(a) for this type of misappropriation, that is, the unauthorized duplication of a sound recording. And if that case ever reached the United States Supreme Court, there would be a clear conflict between the announced federal policy under the commerce clause which is expressed in the McClellan Bill, and the federal constitutional policy of the patent and copyright clause which was the subject of the Supreme Court decisions in *Sears* and *Compco*, and then at long last maybe we would find out what the limits of *Sears* and *Compco* are.

This is a long answer. It was a very long question.

MODERATOR CARY: Thank you.

The next question is, I believe, an unfair one. It is directed to the

Moderator. I always thought moderators just got up and introduced speakers and kept time. This is with respect to the computer coverage.

"Is there a provision relating to copyright coverage of programs. If so, has consideration been given to covering performance, that is commercial utilization of programs?"

As you may know, the Copyright Office has taken the position under the present law that computer programs are subject to copyright. I won't go into the whys and wherefors. It is a long story. Briefly, now, the Office's position is that a program contains instructions; it is like an instruction manual which, of course, is protected by copyright. In that sense it is a writing of an author under the Constitution. The Office has said we will take programs on this basis. Now the Office has very carefully stayed away from the type of protection you are going to get. Presumably, you would at least get protection from the replication of a program; whether you would get protection for the actual use of the program is another question.

This question which is posed here is whether the new bill would go into that. The new bill, first of all, would continue what the present situation is, that is, it would retain the copyrightability of a computer program. It does not, however, go into what the questioner calls the performance aspects. This is left for development by the courts, whatever that may be. I assume that the problem here is whether a computer program is a process, as some people have, I think, taken the view, and the Office understands that there are programs that in effect are nothing more than processes, maybe control processes. However, we are concerned with the actual program which we believe is the writing of an author. My own personal guess is that about all he would get would be protection against the replication. I would seriously doubt under the present law or even the bill that there would be any protection for the performance of that particular program. Because then you get into the problem of use and the courts have been pretty firm that you do not protect uses, per se, by means of copyright protection.

There is one more question here, that says:

"Can you speed up the answers? Time is very short."

This concludes the program.

DIRECTOR L. JAMES HARRIS: Thank you, Mr. Cary and panel for a very interesting discussion.

THIRD SESSION

Management Responsibility and Decision

DIRECTOR L. JAMES HARRIS: Now we have arrived at the final session of the program, "Management Responsibility and Decision." We have heard the problems and issues presented by persons dealing with R&D, we have participated with the experts in discussing proposed solutions and now we are ready to find out what will probably be done about it.

The Moderator of this portion of the program is Mr. Earl P. Stevenson, the former Chairman of the Board, Arthur J. Little, Inc., and the present Chairman of our Advisory Council.

His background in research and management is broad indeed and he is particularly well qualified to moderate this final session.

It gives me great pleasure to introduce Mr. Earl P. Stevenson.

(Applause)

MODERATOR EARL P. STEVENSON: Thank you, Dr. Harris, ladies and gentlemen, the topic for this particular session has already been given to you, "Management Responsibility and Decision." The Moderator still finds himself in a haze as to the delineation of this particular title. We hope it will take on greater clarity as our discussion progresses.

We now approach the finale of the Eleventh Annual Public Conference. Those appearing in this session are faced with the challenge of contributing to a rather ambiguous topic and with the insatiable urge to participate in a more general discussion centering around certain of the more controversial issues raised by the President's Commission's Report, and the proposed implementing legislation.

The Moderator will be the first victim of this dilemma. The title gives all of us a rather broad license, and I think you will agree, that we will exert this license to varying degrees. I pass this license on to my participants.

For the past 47 years, I have had many involvements with the operation of our patent system. As an inventor, as a patent expert, research director, industrial consultant, negotiator of licenses, chairman of patent committees, of professional societies, and member and chairman of the Advisory Committee of The PTC Research Institute.

Despite many frustrations I am still very much intrigued and an advocate of the basic role of the inventor in the overall innovated process and the conventional view of the patent system's purpose and economic value which I quote: "It protects the fruits of your ingenuity and research by making them available to the public."

We have at this Conference emphasized what I would call a precious heritage, a heritage that we should attempt to preserve while recognizing that the system, any system, is a living organism and it is subject to change. What we are considering overall, is the kind of changes which we should effect now in order that our patent system may be still more vital in its role as it projects into the future.

Whether or not the present proposed legislation is enacted into law, with or without substantial change, management of major industrial enterprises, (such as we have on our panel today) that are subject to technological change will have to reckon with new responsibilities and new sets of ground rules. Decisions with respect to patent activities will move closer to the front office. While operating decisions will continue to be delegated as new ground rules will not degrade the profession, policy decisions will have to be made.

I would anticipate that many internal patent departments will be in for an overhauling. Many questions will be posed that go well beyond present departmental responsibilities and jurisdictions. Secrecy, internal communications, employee contracts and relations, publication in scientific and engineering societies' publications, reward and recognition of inventive contributions, to name a few.

It is important from my viewpoint that as a by-product of the

present controversy, we achieve a better understanding of the role of the inventor in the overall innovated process. Innovation and invention, as pointed out by our speaker last evening, are not synonymous terms. The patent system of which we speak today is in effect a sub-system, in terms of a larger system. I venture to say that patents are playing a diminishing role. But such an appraisal does not deny their continuing importance. The thoughtful address that we had last evening from our medalist deserves the most careful reading by all those concerned with the evolutionary changes that now lie ahead.

I regret the word "reform" as attached to this bill. The contrast which he pictured last night between the horse and buggy days of the 1830's was very graphic. For those of you who did not hear this address, the contrast in the field of transportation was to reduce the circumference of the world from 25,000 miles to 250 miles, and in the communication field, distance no longer has any meaning in this the dawn of the satellite day.

Since World War II, countless conferences and symposiums have been held, and library shelves have been filled with books which have been written by technical specialists concerning the business of discovery through organized research and development.

Here I would note that in 1940, the national support of research and development (R&D) was of the order of \$400,000,000. In 1966 the expenditure reached plus 20 billion dollars. So we are living in a new day. The issues before the President's Commission while familiar to the research and development executives have had only a very limited audience. I have observed since the war a decreasing concern and involvement on the part of top management, with the basic questions affecting the patent system. This can be explained in part by the growth of enterprises and the better structuring and delegation of responsibility and authority. Certainly the gap of understanding and interest between those seeking protection for a company's basic interests in the promotion and development of new processes and products, and top management have by no means lessened. They have widened. As one item of supporting evidence I would cite the difficulties faced by The PTC Research Institute in achieving a self-supporting status during this period, through adequate support of its programs by industrial management. There is evidence, however, of a change here which I am delighted to report, and also state that the Report of the President's Commission, if it has accomplished nothing else, is re-awakening interest. The Institute is meeting with considerable success in recruiting new members and, in terms of dollar values, securing

substantially greater support from those companies which have been identified with our program from the beginning.

Now, turning to the topic for this session, I would like to point out the significance of the term "decision" in our title. What is our concern? Decision points will multiply and become the concern of more executives in such corporations as are represented on this panel today. This is my proposition. By way of illustration, let me call your attention to the charts appearing in the President's Report. I regret that I am not in position to project these on the screen. However, I know most of you are familiar with this Report of the President's Commission.

I begin with Chart 2 entitled "Examination and Review within the Patent Office." It shows the course starting with the complete application as filed and tracing through the many alternative routes that can be followed to the point of issue of that application. This is by no means linear programming. There are a number of points where management is faced with choices, as many as three. These choices are vital.

I do not want to anticipate the comments of members of the panel, but let me try to explain what I mean by "decision" by a specific illustration. Let us take the case of the deferred application. This is one of the alternatives faced as shown on Chart 3. If this alternative is elected, competitors in the course of a short time will receive the publication of the unexamined application. The man in charge of the patent department of a competitor is then faced with the responsibility of deciding whether or not to challenge patentability on the score of prior art or practise.

So I say the responsibilities of a corporate patent department, then carry up through, because these are policy questions—and I would venture to say that many major companies would be very hesitant to exercise this option, that is to challenge. But I am sure that it is still the responsibility of the head of the patent department to see that the top executives know of this situation. It would then be their decision as to what to do with it.

Now we come to our panelists. I am going to follow the precedent of others in taking the position that no detailed introductions are necessary. Time is running out. I am mindful that this is the end of the morning on a Friday of the last day of the Conference. It is in this spirit that I introduce our first participant, Samuel Lenher, Vice President, E. I. du Pont de Nemours and Company.

(Applause)

MODERATOR STEVENSON: Sam, will you take the podium?

SAMUEL LENHER

Thank you, ladies and gentlemen. My comments are those of management on the President's Commission's Report and legislation. They will concern only that matter this morning and I trust briefly.

The Report of the President's Commission points in various ways to the betterment of our patents and their procurement as among our principal objectives. However, the published statements relating to the proposed revision in our laws have emphasized the fifth objective of the Commission, namely, "to make the United States patent practice more compatible with that of other major countries, wherever consistent with the objectives of the United States patent system."

This reads very well and certainly has a rather pious connotation suggesting we try to get along with other people and be more like them. However, on closer examination, it will be noted that the quoted statement refers to "that (practice) of other major countries" as if this country is the only one that is out of step. Those of us who have been exposed to patent affairs recognize that nothing could be further from reality, for nearly every country varies in some important areas in its patent system from those of other countries: for example, the life of the patent, the degree of searching, type of patents permitted, as well as licensing, working and enforcement. The briefest examination of these nationalistic approaches makes it plain that it is hard to find a common denominator to which we could conform. This is not to say that we should avoid adopting practices implemented in foreign countries that might fit well into our own patent system, but we should never make the change merely for the purpose of being like others without concern for the attendant problems or detriments.

Before looking specifically at what is hoped to be accomplished by way of new legislation on the Commission's proposals, let me say this: looking at our own corporate experience with patents worldwide, there are certain matters of tremendous importance that seem to be possible of accomplishment without complicated legislation. Also, they are of such importance that, in first implementing them, we would be keeping the horse well before the cart.

First, why can't we adopt, on an intelligent international basis, a uniform set of requirements for the form and content of the patent application? Think what a saving would be involved if we could use the same disclosure (or its direct translation) under every patent system in the world. Those with experience in the international patent field will recognize immediately the value of such a change.

Secondly, and of equal importance, would be the creation of a central research facility, keyed to the uniform patent application mentioned earlier, as a substitute for the widely differing and probably inadequate independent searches made on the same application (in varied form,) in the many countries that make at least some effort to develop the anticipating art.

Neither point is novel. They have been aired from time to time, but they never have had the desired result of bringing about change in these key areas. Isn't it possible for this country to take the lead position in this area and, hopefully, to accomplish by these simple and direct routes, a portion of the objectives of the President's Commission without the charge being made that we are frying our own fish?

I cannot help but believe that these two simple proposals present a joint solution to the reduction of our own Patent Office case load. This would also go a long way toward achieving a significant part of that desired objective—a more uniform worldwide approach to the obtaining of patents.

Earlier this month, the U.S. Department of Commerce and the U.S. Department of State proposed a patent cooperation treaty, designed to simplify worldwide protection of inventions. While a patent treaty may be desirable, the advantageous features of the treaty proposals and also those made in my suggestions in this paper could certainly be put into effect under existing statutes by multilateral agreements without new legislation.

To get down to specifics on the proposed new legislation—S. 1042, which I will call the new bill—there isn't enough time allotted to me to get very far into this subject; but, at the risk of being classed as a dissenter, I would like to make a few points of objection.

The new bill provides for the grant of the patent to the first applicant rather than to the first inventor as now, thus cutting out patent interferences. I know full well the arguments against interferences, but I ask that we retain the principle that the first inventor is entitled to the patent. However, I am in favor of limiting the interference procedure in some fashion, by granting the patent to the first applicant with right to subsequent applicants filing within one year after patentee's filing date to provoke an interference.

The first-to-file system proposed seems simpler on its face and it does approximate certain foreign practices. However, it places the emphasis on hasty filing which may be both premature and inadequate, thereby depriving the public of a full and fair disclosure of the invention. Also, it deprives us of the recognition of first inventorship

which has been one of the major principles on which our patent system rests.

A first-to-file system would encourage quick, superficial research programs and discourage reflective, in-depth scientific and technical studies in industry. Development work under a first-to-file system would have to be rushed after filing, with accompanying increased exposure to wasteful use of scientific and engineering talents, capital, and management attention. The independent inventor would be even harder pressed to be speculative and hasty and, accordingly, would be more exposed. He would find financial backers more cautious. In my opinion, innovation leading to technological advance and the introduction of new products and processes would not be speeded, but confusion of interest would result.

The new bill also provides for automatic publication of each application within 18 to 24 months after filing. This is much too early, and, in any event, violates the principle of our system that the public receives the disclosure as a part of the bargain obtaining in the grant of a patent to the inventor. The new bill also would make the published application, prior art, as against subsequent filings, even by applicant, precluding more adequate definitions of the invention and the protection of closely related improvements by refiling.

As a counterpart to the last item the new bill says that, to gain the benefit of its parent application, a continuation-in-part must be filed before publication of the parent. To the extent that publication may occur before allowance of the application, we feel this is wrong, for refiling is often the only way to end with a patent which properly discloses and protects the invention. Any delay so created is at the expense of the applicant who would be limited by the new bill's provision for measuring the term of the patent from its filing date.

The new bill would abolish the present one-year grace period for filing after a publication, use, or sale has occurred. This conforms with some foreign procedures, but what do we stand to gain by such a move? It would build up the pressure for hasty and ill-contrived application drafting. For example, it certainly seems unreal for a disclosure of the invention by the applicant, whether intentional or inadvertent, to be used willy-nilly as a bar. It would make sense to retain some period of grace even though it may be no more than six months.

Again, why should we permit knowledge, use, or sale outside the United States to be treated as prior art as proposed by the new bill? How this would be implemented in the Patent Office examination is

beyond my comprehension; the present examination system is sufficiently complex. It seems more likely to add to the defenses now available against any patent and would throw a cloud of uncertainty on the validity of any issued patent. Who could ever know in advance what might be turned up at trial time in the way of public use in Timbuktu? And how can such a provision advance the progress of the useful arts in the United States?

This is almost a too brief and too casual approach to what we all recognize as a matter of the greatest importance to those of us who are interested in the preservation of our patent system. There are so many other points involved in the proposed new legislation that deserve our measured consideration. I feel we should proceed here with the greatest caution, for I can recall that over the past few years numerous changes have taken place. For example, take the shortened prosecution and circumscribed interference practice instituted by the Patent Office. Both of these were adopted with at least one of the objectives voiced by the President's Commission, namely, to reduce the Patent Office load, and to some extent this seems to have been achieved.

However, none of these has been so fully implemented as to enable us to know their full value in solving the Patent Office problems. Other procedures should be introduced only if they offer some clear improvement over those already in being.

Thank you. (Applause)

MODERATOR STEVENSON: Thank you very much.

I am going to call on our speakers in order in which they appear in our program. Let me say before I call Dr. Currie to the microphone that we have had earlier associations. I recall our being together in Nancy, France, several years ago as United States representatives at a European conference on the question of "How do American corporations organize for research and development?" As I recall, Lauchlin, you and I were exposed at that time to the divergence between European patent systems and ours. This was the first time I had ever met it head-on so to speak. It is a very great pleasure for me, particularly, to have Dr. Currie on our program.

Lauchlin, won't you take the podium? The Conference program identifies him as former Vice President of Babcock and Wilcox Company. I don't know whether you claim in that capacity to be a chemist or engineer or not?

DR. CURRIE: It depends on those in the room.

LAUCHLIN M. CURRIE

Mr. Chairman, ladies and gentlemen, regrettably I missed the earlier sessions of this Conference, but I am sure that all of you have heard thoughtful and careful discussions of the Commission's Report and of the Patent Reform Act of 1967. I am sorry I missed yesterday's Session but I fortunately got to hear Dr. Hafstad last night. Accordingly, I rearranged some of the things I intended to say to you. I believe I am what Dr. Hafstad called a "concerned amateur." Incidentally, I do not speak for the two big corporations for which I now once worked. I am now "unemployed." I believe, however, those two firms would concur with most of what I am going to say.

I am sure the Report of the President's Commission has received very careful attention at this meeting. I am sure you have studied also the so-called Patent Reform Act. Actually, I dislike the word "reform." I think "improvement" might be a better term. I concur with most of the representations of the Commission and with the provisions of the Act. There are, however, a few that I wish to comment on specifically. It may have escaped some of you that the subjects of the first four sessions of this conference were stated as questions. Each one, "will so and so happen?" This one simply says "Management and Responsibility." I think literally translated that means "the buck stops here." Decisions of management, however, can't be made without considering all the regulations, both current and imminent. I am going to take the liberty of duplicating (although I think it is more like "backing up") what Dr. Lenher said on some of these points.

Some years ago I had begun to feel that we were beginning to see the end of the patent system—that is of our U.S. patent system that had so long and so well protected inventors and their patents, and contributed so much to our national progress. There were three main bases for this pessimism:

- (1) Government sponsorship of an increasing percentage of American R&D efforts, complicated by disputes over relative rights of government and contractors (to rights arising from these contracts) seemed to be leading towards a system of publication, secret operation or of government ownership of all such patents.

- (2) Increasing activity by government antitrust groups were raising doubts as to how—and if—a patent, duly adjudicated, could be used profitably and still keep out of the antimonopoly courts.

- (3) The enormous proliferation, in both numbers and fields, of

patents, increasingly multiplied difficulties facing management patent situations.

My first basis for worry is a problem of contracting. It is not per se a patent problem, but it may prove to be a controlling factor in management decisions re patents, and patentable work. I believe that American industry is generally agreed that industry's rights to patents arising from work on government contracts are directly proportional to industry's contributions to that contract.

If the government pays all costs of the contract, if the subject of the contract is foreign to the contractor's background and experience, (and all too often the contract represents the contractor's first excursion into the field) the contractor is entitled to nothing more than reimbursement, for his expenditures. That is a personal opinion, not officially approved. His only reward should come in the award of a head-start on his competitors. If he can't maintain it, he should not have had the contract in the first place. As is well known, this policy tends to drive contracts towards groups least qualified from experience, but willing to start in a new field. On the other hand, where the contractor contributes experience and background, personnel, facilities, prior patents and so forth, he should have a preferred position regarding the patents arising from the contract. Ownership of the patent, by the contractor, but with suitable licenses for protection for all government rights is a logical answer.

I will pass over rapidly another basis for my one-time worries—simply proliferation and ownership. These are caused by the enormous proliferation of both patents and applications and that brings us to the question of the first to file. Other speakers besides Dr. Lenher have questioned the policy of the first to file. This recommendation and the supporting sections of the Act appear to reduce to zero the value of actual dates of conception and reduction to practice. Admittedly, filing dates can be established clearly and positively, and their use will undoubtedly reduce the number of interference actions, but their use places undue importance on the patent filing rather than on the invention. The race to the Patent Office may become like a western movie, "He may not be right, but he was fastest on the draw." This could apply to some of our patent applications under the first-to-file rule.

I expect the first-to-file idea would encourage a flood of so-called applications from the science fiction writers, half-baked or even raw ideas that would flood the Patent Office—"patents" in search of an idea. This might give to Rube Goldberg or to Flash Gordon more patents than Edison.

The five amendments proposed by Senator Long of Missouri do not affect the first-to-file concept. They do, however, cover worthwhile questions which I think should be considered.

Amendment 182 attempts to insert a personal grace period which I would favor.

Amendment 185 seems to offer or protect rights similar to the old "shop rights" formula. These were certainly admirable.

But of the five amendments offered by Senator Long, Amendment 183 would implement Recommendation XXII of the President's Commission, and give to the patentee rights which most companies and inventors still think were given to them about 130 years ago, namely, the right to treat a patent as personal property.

I cannot help thinking that failure to include this recommendation of the Commission (XXII in the Patent Reform Act of 1967) represents just another round in the court actions of the Federal Trade Commission and the antitrust branch of the Department of Justice against patentees or other owners of patent rights. The 600 or 700 lawyer-employees in these two arms of the federal government can make a real two-fisted fight against monopolies, even legal ones, like patents. A small David has little chance against such a Goliath. I doubt if it were accidental that Recommendation XXII was omitted from legislation, drafted by part of Department of Justice personnel.

From a managerial standpoint, however, if a patent cannot be treated as property, and if a patent cannot give to the owner the right to use and determine who else can use the patent, managerial interest and the value of a patent is greatly reduced. Companies may decide to use patents simply as parts of a defensive mechanism, to prevent other parties from claiming prior patents that will handicap the company. Doubtful applications may simply be published.

In the October 10, 1966 issue of one of the weekly reports of the Bureau of National Affairs, Inc., there is reported a case in which the Court of Appeals for the District of Columbia held that the Federal Trade Commission was justified in taking action against a patent owner who, because it granted licenses having different royalties to different parties, tended to hinder competition. Somewhere in here there is a need for rationalization of patent and antimonopoly laws. Somewhere in here there is a *reductio ad absurdum*.

There is no need to explain to you the purpose of the original patent acts. They were planned to give to an inventor a monopoly for a limited period, in return for which he published, made patent, his new idea. I cite a particular example which may be helpful. Xerox might be typical, or at least would like to be typical. Our patent

system gave to this very small company confidence to embark on a courageous and extensive program of development, made possible such a large corporation from the small one, and justified the large firm's spending of large sums of money to enlarge the usefulness and the scope of the invention, and to provide to the public the many advantages derived from the programs. Xerox thought that its control of its particular system of reproduction permitted it to disclose its processes through publication. Others, having the assurance of the protection of their own inventions, have caused the entire field to develop rapidly, and today the woods are full of such devices. The program has increased competition rather than, as many advocates of change have thought, provided a throttling monopoly.

Approval of Amendment 183 (Senator Long) would help to remove some doubts as to the value of a patent. The owner could better estimate whether his patent (1) has a real and defensible value, or (2) is an invitation to a law suit, or (3) nothing more than a bundle of uncertain rights. I believe that a large part of the value of the Commission's report will be negated if this amendment is not included in S. 1042, as finally passed.

Management decision re patents involves voluminous and complicated study by the manager and his patent staff. Not the least of his problems are caused by the proliferation of technology and of patents, further complicated by long-time pendency and differences in international patent practices.

This situation was emphasized in a speech, made earlier this month by Brigadier General David Sarnoff, who forecast that adequate technology would be available by 1975 that would make possible almost instantaneous patent searches. If patent laws of the participating countries were uniform, a central computer could quickly determine if an invention were patentable under those laws. Instantaneous patent search sounds like a contradiction in terms, but this would be part of, and typical of, this age of exploding technology. The attainment of this ideal is a noble objective.

As Dr. Stevenson has already stated, managers of major industrial enterprises subject to technological change will have to reckon with new responsibilities and new ground rules. This is a bit of an understatement. This has been true through the years. There have been gradual changes. Some of the more recently suggested may be a bit more abrupt. I think Dr. Stevenson gave us another statement that patent policies are seldom a real issue. There have been many conspicuous instances where they were, where the patent determined

the overall managerial position of the whole company and every decision of the whole company.

Policies for management of patents and other industrial and intellectual properties are definitely in for some changes. In January, 1965 at a National Association of Manufacturers' conference, Mr. Bobis gave an excellent summary of the factors determining the formulation of patent policies. The formula would vary from company to company, depending upon the needs of the particular company. Company size, financial position, plans for expansion, competition, et cetera are simply a few of the many factors that must be considered.

There are at least three main types of policies, with numerous variations on each. One is the merely defensive policy, often chosen by large and successful companies. Another, the defensive (with some efforts at exploitation) where findings do not tie in too closely with current company activities. The third is solely aggressive exploitation, usually limited as to number and confined to small companies or emerging industries. Each of these three types requires a careful balancing of costs of obtaining patents against risks involved in its absence. Balances also must be struck between estimates of the potential revenue during the life of the patent versus the cost of obtaining and enforcing the patent.

Today, even more so after current legislation is settled, management must make sure that patent counsel understands the changing regulations for both domestic and worldwide patent protection. A whole new program will be required to establish and follow the practices involved in first to file. This may involve a carefully scheduled, metered feeding of information to the Patent Office, and would greatly multiply work both at the inventor's office and in the Patent Office.

The costs of R&D programs, costs of patents, their filing, maintaining and defending, complications that arise when too many patents crowd and dominate a field (such as nylon), completeness of disclosures, unintentional fraud—I think the Supreme Court has recognized five different types of fraud, at least they are "legal" types—and expenses and potential penalties in connection with antimonopoly actions, all these make up an incomplete list of points that must be considered by management.

The President's Commission on Patents did a yeoman job: the Patent Reform Act of 1967 will, when properly amended, represent a step forward. Further action seems desirable to reconcile the laws affecting patents with those controlling monopolies. Until these various factors are ironed out, I fear that there will be an increasing tendency for many inventors and companies, particularly those using

patents primarily for defensive purposes, to make full and detailed disclosures, in magazines like the *Scientific Journal of Lower Slobovia*, or depend upon industrial secret operations. Neither decision would help the patent system of our country.

(Applause)

MODERATOR STEVENSON: The name of the company with which our next participant is associated serves well to remind us of the origin of our enterprises, and to remind us again of our heritage. In the annals of American inventors the name of "Westinghouse" stands very high. So it is for me a very great pleasure to have the representative of that company on this particular program. May I say that this is the first time that I have had the pleasure of meeting our next speaker, whom I now introduce, Mr. Robert Wells, Vice President of the Engineering Division of the Westinghouse Corporation. Mr. Wells.

(Applause)

ROBERT L. WELLS

Mr. Chairman, ladies and gentlemen, with the problems of timing we have been facing, I am tempted to tell you a little story I encountered once in a similar situation. The entire music review of a concert as written up in the newspaper read like this: "The Detroit String Quartet played Brahms last night. Brahms lost."

I will try to be succinct, but perhaps not to that extent.

Let me open my remarks this morning with a disclaimer. My background is not in the patent area. It is in engineering and business areas, and it is from this point of view that I will try to contribute to the subject under discussion.

First, a word about business objectives, and then about the type of engineering done in industrial concerns like our company. Like any industrial concern, we have two basic objectives, to serve our customers with goods and services that will perform a needed or desired function for them. Second, to make a satisfactory profit for ourselves in proportion to the investment that we need to make.

With these background objectives in mind, before we undertake a development effort on a new product to perform some needed function, we examine the proposed effort quite carefully to see if it is a

prudent business move. Can we provide the function satisfactorily? Can we make a satisfactory profit on the product or the service we would provide? We analyze the economics and set tough key objectives for the men who will be working on it. Generally the key men are involved in assessing and setting the objectives.

The five primary objectives are these:

1. A clear statement of the performance of the product.
2. The product cost. It isn't enough to say I will provide a new product at as low a cost as possible. One has to set a product cost objective related to what the market will pay for the product or service.
3. An objective on the total development cost, including engineering, manufacturing, marketing and any other objectives, any other functions that need to be contributed.
4. A time schedule with key events.
5. An objective for the amount of investment to be committed, both the new investment and the old facilities we may utilize.

For the man responsible for the development effort, meeting these objectives will necessitate appreciable creative work and if met will give us a high probability of satisfactory return on the investment. The key point of outlining this background and these objectives is to point out that creating patents is not one of our key objectives when we undertake either a major or minor development effort. But I hasten to add that patents are a most welcome by-product.

In this environment and in a relatively mature organization business decisions relative to patents are made today with relatively little effort, because we are immersed in and have been continually briefed by our patent people on the present climate of patent protection and privileges. With proposed laws there will need to be significant shifts in how businessmen operate in the new climate.

Let me explain first how we operate under the present laws and then explore how we would have to change to work within the framework of the proposed revision to the patent laws.

Under the present laws, in our division engineering organizations, procedures are relatively well-established. The engineer-designer, the inventor, has several things to do: to conceive of the invention and identify it during the development or design of the commercial product. It is important for him to have an adequate ~~written~~ record of the conception and a record of the fact that he has ~~communicated~~ it to someone else. He has an obligation to ~~prepare~~ a written disclosure following some very helpful guidelines prepared by our patent department. As his engineering effort continues, he is obligated to keep a

record of the effort expended in attempting to reduce his conceptual idea to practice.

In each engineering department, we have a patent committee composed of the engineering manager or one of his senior and highly respected associates, a marketing representative, a manufacturing representative, and a patent attorney assigned to cover that division and generally also a few others. This committee meets periodically and evaluates the key items on the idea such as feasibility, commercial practicality, potential for achieving a profit, compatibility with present facilities and distribution systems, and, of course, the patentability of the idea.

The committee makes a decision either to file, not to file, or to reconsider after further development effort has taken place. The committee also authorizes awards to the inventor or inventors because many are the fruits of joint efforts. This is part of the motivation of these men to take the time and effort to write up their ideas.

Another aspect of management decision in the present environment relates to domestic licensing. In most instances we are willing to grant non-exclusive domestic licenses on patents that have evolved during our development work. Occasionally, much less often than with the patent licenses, we also provide information and know-how.

Practices with respect to foreign patents are well established. We do take out patents in other countries but we make individual decisions on each patent, weighed against the business prudence of having patents in these countries. A foreign patent committee evaluates the foreign commercial importance of each invention and decides where to file the application. We have patents in some 35 different countries; I am sure no one patent has been taken out in all of them.

A recurring type of decision relates to adversely owned or held patents. In this situation we have, as everyone does, certain options open to us, either to take out a license from the owner of the patent, design around the patented idea, or to get out of the product line involved.

Crucial to making the choice between these options is business analysis. For example, where the royalty is excessive, it may be cheaper to design around the patent, and in these instances it is not unusual for a better product to result, a better way to perform the function for the customer, and, in many instances, additional patents may evolve.

Now let's turn briefly to some speculation about the management decision process in the climate of the proposed laws. As I understand it, the significant aspects of the proposed law are these:

The first person or company to file will get the patent.

Publication, or public use or sale anywhere in the world before filing bars the possibility of a patent.

The information associated with the patent application will be made available to the public between 18 and 24 months after the filing.

These are the salient new factors upon which I have reflected.

Significant changes in our *modus operandi* and perhaps in the *modus operandi* of other organizations such as ours, are the following:

First, there will be substantially reduced dialogue between our professional engineers and other people working in their areas of technology. We will need to maintain greater secrecy on jobs in work. We will take greater care in our conversations with vendors. These thoughts relate to the fact that the first to file gets the patent.

Second, it will be necessary to promote among our scientists and engineers an earlier recognition that an invention does in fact exist. We will need to promote immediate disclosure and extremely prompt evaluation of the conceptual idea.

There will be as has been mentioned before, vastly more applications, both foreign and domestic. When someone isn't quite sure whether it is a valid idea or not, he will err on the side of submitting the application.

Third, coincident with this point is the corollary that patent research and patent preparation before filing will be reduced. There won't be time to do as thorough a job as is done now.

Fourth, we will review quite carefully patent applications that are submitted before the 18th to 24th month publication date has been reached and request abandonment or withdrawal of applications that offer little possibility for obtaining a sound patent. This move, of course, will be taken to avoid publishing of whatever know-how or development thoughts are contained in the application.

Fifth, we will need to reduce the dialogue we have with our licensees on new ideas until patent rights have been protected by filing. Today we have quite free dialogue with many associated companies, and this will need to be curtailed.

Six, looking at adversely held patents, I believe there will be more extensive and more world-wide searching of prior art to determine the validity of adversely held patents.

Before taking out a license or worrying about an infringement situation, there may also be more designing around patents than in the past.

Just a few words in conclusion. The changes proposed in the patent laws could be handled in an industrial organization such as ours, but

the management decisions will be significantly different in a number of areas as I have indicated.

I believe that there will be substantially increased expense and manpower with a good portion of it not productive or, better said, wasted, particularly in the filing area.

We now file selectively after careful analysis of patentability and commercial importance.

There will be a significant re-education problem internally in businesses to minimize the inadvertent or unintentional loss of patent rights.

I imagine that there will be significant change within the Patent Office with the onslaught of more applications and more unimportant submissions of new concepts.

And, finally, it is not at all clear to me from the reflection I have given it to date, that the effort expended will be worthwhile in toto.

I thank you. (Applause)

MODERATOR STEVENSON: Our next groups of participants comes from the Research Staff of the Institute and our first participant in this category really needs no introduction here. I have been coming to these sessions for many years. I have heard Professor Oppenheim introduced on so many occasions and in such laudatory ways that I have nothing to contribute except to say welcome.

May I give you the podium?

S. CHESTERFIELD OPPENHEIM

Mr. Chairman, ladies and gentlemen: Having taught four decades in law, you might wonder why I have a prepared manuscript. The answer is I just don't trust myself. After you have taught that long, you develop an obsession that you either have a God-given or some kind of Constitutional right to talk for 60 minutes of a class hour without interruption by questions. So I prepared a manuscript.

Discussions at this Conference, like other public forums for interchange of viewpoints on industrial and intellectual property systems, should warn us against oversimplification and superficial generaliza-

tions concerning the impact of the plurality of proposals for improvement of those systems. This is especially true in decision-making approaches to the complexities of the American patent system.

In the Anglo-American sphere, that structure has evolved from historical premises as far back as the English Statute of 1623. That law explicitly made an exception from the ban on monopolies in favor of patents for inventions. But the teachings of history alone cannot provide pat answers to current controversial issues about the effectiveness of a patent system in action under contemporary conditions. Likewise, theoretical concepts and logical reasoning should also make us wary of easy ready-made conclusions regarding their translation into operative effects deemed beneficial or adverse, as the case may be, to the patent system.

These observations apply to the *Report of the President's Commission on the Patent System*. The interim since its public release has provided a "thinking period," or "cooling off period," depending upon one's initial reaction to the Report. Speaking for myself, I believe that whatever the ultimate outcome of congressional consideration of the pros and cons of the Report may be, the document has public interest value in surfacing issues, some old, some new, on which a joinder of viewpoints should result in net benefits.

This panel is addressing itself to management responsibility and decision-making. These functions cannot be fenced in by purely self-interest motivations. The fountainhead of the decisional process may encompass many facets in a spectrum of diverse interests. Improvements in the patent system touch upon the small as well as the large corporation, the independent inventor, research laboratories, development, and market planning. Public attitudes are also involved in the evaluation of proposed patent system improvements.

One thing is clear. However dispassionate and reasoned the judgments about the Report may be, resolution of disputed questions will not come from a rigid all or nothing, black or white attitude.

No dissenting voice, to be sure, has been recorded regarding three basic conclusions unanimously adopted by the Commission. One is that "A patent system is capable of continuing to provide incentive to research, development and innovation." A second is the Commission's affirmative assertion that its members "have discovered no practical substitute" for a patent system. Equally reassuring is a third generalization that "the lone, independent inventor, even in this day of sophisticated technology, still contributes most importantly to the useful arts."

These conclusions are gratifying to those who, like myself, have long

believed in the fundamental premises of our patent system. Nevertheless, many recommendations in the Report have evoked vigorous opposition, particularly from patent bar organizations, because of doubts that they are compatible with the maintenance of the fundamentals of the patent system espoused by the Commission itself.

My decades of teaching antitrust and trade regulation law and its relation to the cognate areas of the patent system, have made me constantly concerned with the methodology and processes of research directed toward gathering and evaluation of factual and empirical information. This experience has convinced me that the patent laws enacted to support the patent system constantly need testing against their actual operation and effects. This, I believe, is the only reliable way to determine whether the patent laws and the system are functioning in a manner that measures up to the ever-changing technology and its linkage to the economic and social values we set as goals for our competitive society.

I think, from my point of view, that this is the key point with regard to management responsibility and decision-making. Will those decisions be made, will the management responsibility be assumed, with full awareness of factual information and not merely opinions?

In 1951 I wrote a paper setting forth the theme that a constant deficiency in approaches to evaluation of the patent system is attributable to the wide gulf between theory and fact, between abstract generalizations and empirical data. This is a gap that is not bridged once and for all time by specific research projects. Factual and empirical research is an ongoing process impelled by the insistent demands of the restless forces behind the advancement of science, technology and the industrial arts. As these forces explode, their impact challenges further probes for knowledge stemming from marshaling of factual and statistical evidence as a basis of reliable guidelines for policy decisions of government and affected private parties.

The Commission's Report and the ensuing recorded opposition of patent bar groups to many of the Commission's recommendations, and their corresponding provisions in proposed implementing legislation, underscore the unfinished research and the need for further factual findings from which an enlarged common ground of understanding may be reached. The Commission's Report, as I see it, invites such endeavors. The letter of the co-chairmen of the Commission transmitting the Report to the President states that the Report's recommendations "as a whole, represent their [the members] combined judgment and general agreement."

But it is further stated that "the recommendations in all of their

details, however, do not necessarily bear the endorsement of every member."

A Commission recommendation for the creation of a Statutory Advisory Council concludes with the statement that, "Continuous review of the nation's changing needs and the capacity of the system to respond is indispensable."

The Report itself therefore opens doors and windows for unceasing attention to the system's actual functioning.

There has been an outpouring of favorable and unfavorable comments on the specific recommendations of the Report. This spate of dialogue is the hallmark of the democratic process. Management of business enterprises and individuals are now confronted with the responsibility of distilling from the competing views the foundation for making their respective judgments, with due regard for their position on the probable effects of the Commission's recommendation and the legislative proposals upon their operations on all levels from research and development through commercial utilization of the fruits of the innovative process.

I regard the Commission's Report as a document designed to galvanize all sectors of our society concerned with the patent system toward explorative thinking and depth studies relevant to the Report's recommendations. The speed with which officials of the present administration drafted legislation to implement the Report and the prompt transmission by the President to the Congress of the Patent Reform Act of 1967, understandably have created concern that what the President characterized as "a series of far-reaching and fundamental proposals" might receive hasty and superficial consideration by the Congress. I hope this appearance of a plea for "all deliberate speed" is belied by the events to come. We are reminded that the proposals for revision of the Copyright Law and the proposals finally embodied in the Trademark Act of 1946 spanned many years of congressional deliberation. Apart from emergency legislation, the history of congressional revision of basic statutes should make it highly improbable that Congress will be disposed to make haste in reconstructing substantive and procedural phases of existing patent laws.

What I have said should not be construed as advocating on this panel discussion a position one way or the other on the specific recommendations of the Commission's Report. My observations are merely intended to stress that, inherent in consideration of far-reaching changes in the patent laws, is the element of time that cannot be circumvented or unduly shortened by a speedup program, whether this comes from government or from private interests.

Having made comments in my individual capacity, I now turn to the relevance of the Commission's Report to the research activities of The PTC Research Institute of which I am Adviser on Research. For more than a decade the Institute, faithful to its trust of engaging in research without prejudgment regarding governmental or private interests, has published factual and statistical findings in reports on various aspects of the patent system. This we have done from the standpoint of the individual, the industrial enterprise, the governmental structure and functions, the international sphere and the public at large. We are gratified that, apart from inevitable differences in attitudes, the Institute's reports have commanded general confidence as objective research, with findings and conclusions letting the chips fall where they may.

The Institute would be derelict if it failed to adapt parts of its research program to certain studies relevant to the Commission's Report. We have therefore responded to the summons of the Report for continuing research on the operations of the patent system and identification of possible improvements in it. This adaptation we made last January when the Institute announced that priority is being given to ongoing studies of relevance to the Report. These studies are designed to produce factual and empirical data not available from any past or present studies known to us and beyond the kinds of research projects customarily undertaken by patent bar groups or through the usual procedures of congressional hearings.

I have been in Washington since 1927, with certain interludes in Michigan, and I have never attended a Congressional Committee hearing which gave me the impression that research studies were really the subject of the hearings. Most often there isn't money and time for the committee staff and others to make such studies.

Briefly stated, five studies have been projected. One is an inquiry addressed to assignees and inventors of patents recently issued. A questionnaire based on a random statistical sampling of patents seeks to develop factual information not only bearing on the Commission's Report but also pertinent to economic aspects of patented inventions.

A second study will probe into the experience of independent American inventors and research directors under the present system and their estimate of the probable effects of certain recommendations of the Commission upon their activities as compared with their past experience.

A third study will gather information on the actual practices of companies with respect to secrecy arrangements and the extent of industrial espionage in particular industries. This has relevance to

certain aspects of the Commission's Report requiring consideration of trade secret protection as an alternative or supplement to patented inventions.

A fourth study will analyze experience (as gained from interviews, questionnaires and literature search) under foreign industrial property systems already having characteristics similar to the proposed changes in the United States patent system.

A fifth study will correlate information and findings in the last published reports of the Institute that might assist in evaluating the Commission's Report.

All of these studies are to be factually grounded. They are not opinion polls or surveys. These Institute studies should not be confused with solicitation of mere subjective thinking of respondents to the questions submitted to them. A person's experience and his estimate of its effects is as factual as any other types of actual happenings.

Let me interject here one further reason why it is in the public interest to encourage both public and private sources of research regarding the Commission's Report. It hardly needs elaboration to be reminded that the sincere and devoted public service rendered by the Commission members and its staff could not be reasonably expected to result in an across-the-board depth treatment of all of the controversial issues, past and current, relevant to the patent system and the body of patent laws.

Public comment has been made of the fact that the background material prepared by the Commission and its staff and transmitted to the Executive Office of the President has not been made public. Personal views solicited by the Commission from private sources should properly be held in confidence since no public transcript of such positions were contemplated by those respondents. But the absence of public availability of the other background material and the absence of citations of authority or other annotations in support of the Commission's recommendations have left open to speculation their legal and factual basis.

These were undoubtedly discussed and studied by the members of the Commission at their meetings and consideration was undoubtedly given to the background material gathered by the staff. The unavailability of these facets for public scrutiny increases the responsibility of the patent bar, managements of business enterprises, the academic community and other parties to contribute their own independent thinking based upon experience, research, or other means of enlightenment regarding the merits of the Commission's Report beyond that

which appears in the Report itself. All of that can be brought to bear on management's responsibility in decision-making and the counseling of the members of the patent bar.

I appreciate the problems faced by the President's Commission by reason of the limited time within which it was scheduled to complete its Report. I experienced similar time problems as Co-Chairman of the Attorney General's National Committee to Study the Antitrust Laws. The views and recommendations of our Committee Report, published in 1955, evoked a great deal of controversy as has the Report of the President's Commission. But our Committee Report, which was primarily based upon an analysis and synthesis of legal antitrust doctrines reflected the judicial opinions and decisions of the Supreme Court, lower federal courts and Federal Trade Commission proceedings, and was documented and annotated with such precedents in relation to the text of the Committee Report and to the antitrust statutes under discussion. The views of dissenting members were noted in our Report.

I recognize that the differences in the subject matter of the antitrust laws and the patent laws and patent system necessarily produce differences in the organization and content of the texts. But putting aside the fact that the background material mentioned by the Commission has not been made available for public scrutiny, the Commission's Report might well have been annotated or documented with references, wherever relevant, to decisions of the Patent Office, the Court of Customs and Patent Appeals and other federal courts, and to selected references from the vast literature on controversial issues on the patent laws and system. Such documentation, similar to that in the Attorney General's National Antitrust Committee Report, would certainly have been helpful in increasing an understanding of many of the views and recommendations in the Commission's Report.

The Institute has initiated research studies we hope will helpfully contribute to clarification of the problems in the Commission's Report. We make no promises and give no warranties other than our resolve to continue our quest for truth and understanding about the patent system, an objective to which we have adhered since the founding of our Institute and which is our primary reason for existence.

Thank you. (Applause)

MODERATOR STEVENSON: I think we are indebted to Professor Openheim for reminding us that there is something more in the Report

of the President's Commission than some of the minutiae and controversial issues with which we have been concerned.

I would like to emphasize by quoting possibly the most significant finding in the whole study of the Commission, which reads briefly:

The members of the Commission unanimously agree that a patent system today is capable of continuing to provide an incentive to research, development and innovation. They have discovered no practical substitute for the unique service it renders.

Thank you, Professor Oppenheim, for reminding us of this introductory statement.

Our next and final speaker is another representative of our Research Staff at the Institute, Mr. John F. Creed, of the firm of Baker and McKenzie. I am going to confess to my limitations as Moderator and ask Mr. Creed if he has not been too modest in propounding himself on his particular interests in sitting on this panel?

DENNIS MEYER

Let me say first, I didn't have a chance to discuss with Mr. Stevenson that I am not Mr. Creed. He had to be out of town today. I am Dennis Meyer.

MODERATOR STEVENSON: How far can you be wrong?

MR. MEYER: I am a member of the firm of Baker & McKenzie and a member of the staff.

I have got three points I would like to bring out this morning, utilizing by the way, Mr. Moderator, your broad license under this heading.

The first point I would like to revisit, a point I discussed last year, also as a substitute for Mr. Creed—

MODERATOR STEVENSON: We are beginning to accept you as Mr. Creed.

MR. MEYER: That is my pen name.

This question of exploitation of intangible property rights in the foreign area. Mr. Wells mentioned insofar as Westinghouse is concerned, they have a committee which makes a very considered decision on such exploitation. In 1962, there was a substantial change in the law dealing with the transfer of patent and know-how, et cetera, to

companies in which the transferor has more than a 50 percent stock interest. It is commonly called the control of foreign corporation. Under these provisions such a transfer results in offered income to the U.S. transferor.

Well, if you are aware of the provisions there aren't really many difficulties insofar as dealing with them. It is the unawareness of this provision, unawareness of the tax consequences that can now arise which I wanted to bring to your attention.

I am aware of at least one company which is presently smarting under a proposed tax deficiency determined by an agent on audit of well over a million dollars. And why? It seems as though this company under a prior plan of action in this area took out a foreign patent in the name of its foreign company without obtaining the approval of the Commissioner of Internal Revenue, which by the way, is required if you are going to make a complete transfer on a no consideration basis. The agent came in and said this has been a complete transfer, namely, an assignment, although imputed you own the foreign company. Therefore, we are going to impute that you receive stock, receive stock for that property transfer and I am going to make a determination as to what the value of that patent is in the area that it is going to be utilized.

So it is a *fait accompli* at that point. There is no legal argument that can be raised principally because the statute requires disapproval as a condition precedent to transfer.

The other situation which can end in just the same tax result, probably not on a one-time basis in the same magnitude, is the utilization by a foreign subsidiary without any type of formal arrangement with that subsidiary, namely, the patent is taken out in the name of the U.S. corporation, then the subsidiary, without a license or an informal basis, is merely using the patent in the area in which the monopoly exists. For example, the U.S. company obtains the German patent, uses the patent in the manufacture and selling of the products in Germany.

The Commissioner now by specific regulations has enunciated his view that an imputed royalty will arise again with ordinary income resultant to the U.S. corporate owner. And in this connection it is extremely important because corporations generally are not audited until three or four years after the actual event has occurred.

If a company let's say, continuing my German company for example, if that company is using a patent from 1961, it is fairly likely that the company will be audited in 1964 or 1965 or if extension is granted, in 1966. So you have a situation then where it is almost impossible to

go back to the German taxing officials and say now the United States tax authority says that our German company used this patent, therefore we would have to include this royalty in our income on an imputed basis. Please give us a deduction for the amount our U.S. patent had to include in its income. The years are closed. Needless to say, there is great difficulty in convincing a foreign taxing official that such a deduction against foreign income should be allowed.

So as I say, I go back and reiterate this point only because I think it is an extremely important point, and because of the deficiencies that are arising around the country. I am aware they are arising for one reason: the Internal Revenue Service and Treasury Department have taken very, very close looks at this area and they have formed some very sophisticated guidelines in this area. They go talk to research people. When the I.R.S. agent comes in and begins to talk to your people outside the tax department, mum should be the word. In one case an agent without any restraint at all found out through discussions with people in research departments that there were no patents made available to the foreign subsidiary, all the know-how that they came up with within various areas was just copied and sent over to their counterparts in the foreign company. So there was a transmission, an informal transmission again without the requisite approval, without any kind of licensing arrangement which would, of course, reflect income in the U.S. corporate pocketbook.

The second point, I think this is completely unrelated to the first, deals with the question of, can you depreciate intangible property rights with an indeterminate life? Trademarks, know-how, et cetera—I think that the focus of this question becomes very relevant now in view of the activities in this country with respect to geographical franchise licensing. One example or case in point deals with Dairy Queen; in the licensing of that franchise to various state owners, generally in the state, the owner of the master franchise subdivides it down on a local basis.

Mr. Creed and I prepared an article approximately two years ago called "Taxes and Trademarks" where we pointed out this was going to be a substantial problem. There is a court case now out in Oklahoma dealing with the Dairy Queen situation which is proving to be a substantial problem especially where these small franchise owners are concerned. In that case the fellow entered into agreement with the state franchise owner. He agreed to pay him 28 cents a gallon for the Dairy Queen mix produced and sold. He made this payment but found out on audit that the payment was not deductible. He had to capitalize it. He couldn't write it off in any way because it is for the

use of the name "Dairy Queen." He acquired all substantial rights and exclusiveness; what he is paying for is a capital asset.

Let me demonstrate the economic impact of this type of situation by this illustration. Some John Doe is enticed by an advertisement in the financial journal that states a lucrative sausage business is available with a minimum capital investment required. I think you see these every day on the pages of the Wall Street Journal. Now he replies to the advertisement. He is contacted by Mr. Jones who shows the standard franchise agreement under the terms of which Doe would be granted exclusive right to make and sell sausage under the trade name of "Imperial Farms." In geographical area, Doe's rights would continue as long as he maintained a certain quality standards, paid an annual royalty of 25 cents per pound of the sausage sold during the year, with of course the normal provisions of audit, et cetera in the agreement.

Suppose in the calendar year 1967 he sold \$100,000 worth of sausage with expenses incurred in the manufacture and sale of the sausage amounting to \$63,000. In accordance with the license agreement he pays the licensor \$25,000. He files his 1967 return and reports this income as \$12,000 namely, the \$100,000 derived from the sale of the sausage less the \$63,000 reflective of the cost and the \$25,000 payment to the state franchise holder.

Doe's 1967 tax return is audited and the agent disallows the \$25,000 payment as a deduction because, in going over the agreement under which the payment was made, he contends, and properly so, that Doe received all substantial rights to the trade name "Imperial Farms" in a specified area. Therefore, the expenditure in question constitutes an outlay for capital assets with an indeterminate life, namely the trade name "Imperial Farms."

Doe is then confronted with this dilemma: he has earned \$37,000 for federal income tax purposes, \$25,000 of which is represented by investment in an asset with little or no resale value. The remaining \$12,000 earned by the company or Doe will probably be barely sufficient to enable him to pay the increased tax deficiency. You can see the compounding effect of this situation should Doe be audited in 1970, the agent goes back, takes this approach for three years with the interest added on to that. It undoubtedly could cause bankruptcy or loss of his business.

Suppose in terms of this situation or the Dairy Queen, assuming that these types of payments are made for 10 years, he says I am going to retire and I want to sell my business. He is asked what he has, and he has three Dairy Queen stands. They say what do you want for those?

Oh, \$350,000. The question is, that that is what he paid for them. He has been paying this franchise for the last 10 years.

The point here is this, that these agreements for the main have been drafted without a real view to the tax consequences to the licensee or the franchisee. I think it is incumbent on people reviewing these people, briefing them also to the extent that generally they cannot be capital gain; on the other end, based on existing court holdings, that you don't get a small franchise holder fellow, just trying to make a small return on what he was initially told was going to be a minimal investment, and put him in this kind of posture. Generally, they don't honestly refer the question to legal counsel; and whether or not the legal counsel they refer it to, if they do refer it to legal counsel, is sophisticated enough to pick it up is another question.

The last point is the question—here is something that has come up, I think probably in the last two years, repeatedly—the question of the large corporate brain drain, dealing with the situation where large corporations are continually losing outstanding engineering scientists, chemists, et cetera. What is the reason?

I think at least in my own experience in this area, it is derived from two factors. Number one, the large corporation's inability to properly compensate this individual. Now, when he does leave he generally takes one of two basic routes.

The first, I think, is in terms of explanation of what the arrangement is. As Mr. Walton mentioned yesterday regarding the independent inventor, he goes out as sole operative, engages in formal or informal relationships with the corporation. Either he has been solicited by the corporation or he contacts the corporation. In that context he operates under a specific arrangement, as I say. I think Mr. Walton mentioned the very informal arrangement which is then formalized by a contract after certain fruits of his efforts come to the fore. Or he starts out with a specific arrangement. But the advantage of this situation obviously is that if he comes up with an invention, the contract is properly drafted, the remuneration that he gets as an inventor is subject only to the 25 percent capital gains tax. Needless to say, he does not have to come up with the number of inventions—one invention, two inventions, certainly, of a substantial nature, are certainly sufficient to provide him with a very attractive living.

I had a situation recently in which an inventor was contacted by a company. He had been with another company under an employment contract with the usual provisions to sign over all patents: all inventions he should come up with were the company's. After he had played out his contract—to borrow a term from the football or basketball

world—at the end of his employment contract, he went out on his own and he immediately made it known he was engaged in these private inventive endeavors. Immediately he was contacted by three companies. He was provided with facilities to engage in the activity and as a consequence, patent applications have been filed. He has entered into an arrangement which^o will provide him with double the income he was making under his former employment contract.

Now the other situation is where these people band together and form their own research and development company or research company. In that connection there has been substantial success over the last three or four years. One company recently engaging in research involving water and air pollution went public. It was a small company formed by a group that split off from three or four companies in this area and formed their own activity. The stock went public at 15. Before the end of the day it was twice that.

So my point is this, that I think from the standpoint of management responsibility, one of the management responsibilities of course is conservation and maintenance of very valuable corporate assets. This is an area that has to be reviewed, the question of compensating these types of people, whether you do it by stock operation or you enter into specific agreements with them where they obtain capital gains by selling them to the company. I think it is a problem that is going to continue, probably is going to magnify in the next six or seven years, as these research companies increase in importance.

I think that is it. (Applause)

Panel Discussion and Question Period

MODERATOR STEVENSON: Thank you. Sorry to cut you off.

We have in the few minutes we have left, several questions to dispose of. The first two questions I have directed to Dr. Lenher. I will ask him to read them, himself.

DR. LENHER: "Is it inconsistent to argue that the patent should go to the first inventor, yet refuse to consider as prior art, prior public knowledge, use or sale anywhere which establishes that the alleged first inventor is not in fact the first inventor?"

This subject was dealt with very ably yesterday. I would rest on the

brilliant and entertaining presentation Mr. Jackson made, together with his perfectly charming slides of the "Behind the Iron or Bamboo Curtain."

There may be an inconsistency in the point of view—there certainly is great practicality in the point of view that Mr. Jackson and I represented yesterday and today. After all, the patent system is an extremely practical operation.

The second question, since Dupont obtains many patents in foreign countries which have a first-to-file system and we only recognize the conventional date, if one is filed, will it have to rush into the U.S. Patent Office any quicker than it does now in the present system to protect its foreign patent rights, if the United States goes to the first-to-file system?

No, I don't believe that we would rush into the Patent Office any quicker to protect our foreign position, if this situation were changed. Perhaps we should, but I don't believe we would, because here again, in looking at the use of the patent from a management point of view, while we have a very large foreign manufacturing interest on balance, our base is in the United States. This is where we carry out the by far greater part of our research, development and manufacturing work. I think a change affecting foreign position would not be determining with us.

MODERATOR STEVENSON: Thank you.

Dr. Currie, you have a question?

DR. CURRIE: I have two questions that I probably shouldn't attempt to answer:

"Do we not already in effect have a first-to-file system in the case where U.S. inventors who make their invention abroad are discriminated against under our present laws?"

My answer to that is that they could have filed in the United States. I don't see that this would affect our present position. I don't believe that is a "back up" for first to file.

There is a second question where foreign inventors, who can rely only on foreign convention date, feel our law discriminates against them.

I would like to refer that to the patent experts, though I think Dr. Lenher covered a great deal of that in what he said about foreign inventors who can rely only on a foreign convention date. I don't think that bears on our objection to first to file.

On the third one, U.S. inventors who are also concerned in protecting their inventions abroad where they can rely only on their U.S. filing date as the convention date—my answer is why does their U.S.

filing date or use of convention date affect them in foreign applications more than the United States? In other words, if the filing date would apply equally well, even though they do have a first to file—as in a foreign country—if they get a first to file and it happens to be the same as our filing here, I don't think the inventor loses anything.

MODERATOR STEVENSON: Are there any further comments on that?

DR. CURRIE: Not from me.

MODERATOR STEVENSON: This is not a panel of patent experts.

DR. CURRIE: Definitely not.

MODERATOR STEVENSON: I appreciate your courage in undertaking to comment on that question.

Our next one—I have several here, we possibly will not be able to handle. The next question is to Professor Oppenheim. I am not sure — this may be one of your former students testing your retrieval system because it says, will you express your feelings concerning Recommendation 22 of the President's Commission? But we will confuse the person by handing you, if you do not recall it, a copy of the President's Report, open to Recommendation 22.

PROFESSOR OPPENHEIM: I wish I could give a satisfactory short answer but the question calls for a rather extended answer. I am heartily in favor of Recommendation 22. I think it is one of the best statements on the accommodation of patent and antitrust policy I have read.

What this Recommendation seeks to do is to adopt a "Rule of Reason" as a statutory guideline for determining patent misuse. This should also be helpful in determining whether there is also antitrust violation. Stated broadly, the Recommendation would sanction contractual restrictions or conditions in patent licenses which are within the scope of the claims of the patented invention and are, as stated in the 1926 *General Electric* Supreme Court opinion, reasonably within the reward to which the patentee is entitled.

This "Rule of Reason" would be applied specifically to field of use restrictions. But the Recommendation has a much broader thrust. Apparently the "Rule of Reason" would also apply to a first sale price limitation in a patent license, such as the Supreme Court approved in the 1926 *General Electric* case. The Department of Justice has sought to overrule this holding, unsuccessfully in the 1948 *Line Material* case and more recently in the *Huck* and *Townsend* case. My good friend, Donald Turner, the head of the Antitrust Division, whom I respect for his knowledge and competence in the antitrust field, but with whom I respectfully disagree on occasion, has said that the *Huck* case was lost because of a procedural error. However, the government in the

District Court expressly disclaimed any intention to seek an overruling of the 1926 *General Electric* decision.

All of Recommendation 22 fits in with my own views I have held and written about over the years. Hence, the Recommendation has not sparked off anything new in my thinking. It would also apply to territorial limitations (now sanctioned by Section 261 of the Patent Code), quantity limitations, limitation as to place of manufacture and the like, if such limitations are reasonable.

DR. CURRIE: I do recall that Mr. Pugh, in his testimony before the Senate Committee, I believe one of the witnesses stating the views of the Department of Justice, referring to Recommendation 22 expressed opposition to it.

PROFESSOR OPPENHEIM: I will say, Dr. Currie, that my understanding is that the Recommendation is going to be incorporated in S. 1042.

DR. CURRIE: Senator Long's amendment?

PROFESSOR OPPENHEIM: Yes, if that is the one. Mr. Turner has said that the Recommendation, if interpreted literally, could make lawful almost every form of patent misuse. He added, however, that he assumed the courts would not read the language literally. Therefore, to know what is within the Recommendation, there will be a lot of litigation, he said.

I would suggest that some of that litigation can be controlled by Mr. Turner himself. But whether there is much or little litigation, there will be need for clarification when a statutory provision is phrased in the general language of the Recommendation.

In sum, the "Rule of Reason" measuring stick does not, in my opinion, sanction the kinds of patent misuse or antitrust abuse held illegal in a long line of Supreme Court and lower federal court decisions. There are, of course, open questions on some aspects of package patent licensing, grantback and interchange of patent rights. Mr. Turner wants to make an assignment grantback illegal per se but he thinks a nonexclusive grantback is reasonable in most circumstances. At any rate, Recommendation 22 is the kind of statement I would have liked to have written myself.

MODERATOR STEVENSON: As we bring our Conference to a conclusion, I can only acknowledge the next two questions. (Pause)

MODERATOR STEVENSON: Please stand up, Sam.

Word just came up that Sam Lenher is a grandfather.

DR. LENHER: Again.

MODERATOR STEVENSON: This is a beautiful note on which—a very productive note on which to bring our Conference to a conclusion. In doing so, I could only acknowledge two very general questions that I

have now before me. The first of these—both of them concern matters about which the members of our panel are not experts. All I can therefore do is put them in the record.

The first of these is to note that 12 African countries have succeeded in developing an international organization to grant a common patent. The question is why in the more civilized countries, have we failed?

I think the answer probably is because we are more civilized, there seems to be always good correlation between the degree of civilization and complicity of that society. I think we are complex. That is one conclusion I think we can draw from this Conference.

The second one notes the fact that the USSR has no backlog and asks why?

The answer there probably is, although here again I am not the authority, that they recently started at zero. Just give them time and they will have a backlog. (Applause)

The final question is addressed to Professor Oppenheim, but I am going to answer it.

How are the PTC studies to be financed?

I can report a luncheon conference following at which that will be the topic. The general answer is that we are appealing to the membership of this Institute which now comprises a very good cross-section of the major American enterprises and companies who have a stake in the patent system, to make this year a grant to our general fund at the Institute in order that we can proceed to accelerate the programs on which we have been engaged for so many years, the elucidation of our patent system's operations.

Now could I ask Dr. Harris if you will bring the Conference to a conclusion? (Applause)

DIRECTOR L. JAMES HARRIS: Thank you, Mr. Stevenson, for your very provocative concluding panel discussion.

You ladies and gentlemen who have weathered the full day and a half of heavy discussion, and are still with us, I want to tell you how much we appreciate the opportunity of reasoning together with you, how much this exchange means to us, how much we have learned, how many ideas this has given us, how important it is for us to hear both sides of a question so that we can better perceive where the gaps are.

I think this has been one of the best Conferences we have had. I feel that we have covered a number of important topics, some very broad, all of them in some depth, and that we have been most fortunate in

our choice of specialists this year. The proceedings, as you know, will be published.

I want to thank our researchers. I want to thank our invited contributors, particularly I want to thank you who stayed this long.

I hope all of you will continue your interest in this field, in the work we are doing, and that you will continue your membership, or will become members of the Institute so that you can fully participate in its work.

Again I thank you all.

The Eleventh Annual Public Conference stands adjourned.

(Whereupon, at 1:15 p.m., the Conference adjourned.)

