

United States District Court,
S.D. California.

QUALCOMM INCORPORATED,
Plaintiff.

v.

BROADCOM CORPORATION,
Defendants.

Broadcom Corporation,
Counter-Claimant.

v.

Qualcomm Incorporated,
Counter-Defendant.

Civil No. 05CV1392-B(BLM)

Sept. 18, 2006.

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CLAIM CONSTRUCTION ORDER FOR UNITED STATES PATENT NUMBER 5,568,483

RUDI M. BREWSTER, **Senior District Judge.**

Pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), on August 28-30, 2006, the Court conducted a Markman hearing concerning the above-titled patent infringement action regarding construction of the disputed claim terms for U.S. Patent Number 5,568,483 ("the '483 patent"). Plaintiff Qualcomm, Inc. was represented by the law firm of Day Casebeer Madrid & Batchelder LLP, and Defendant Broadcom Corp. was represented by the law firm of Wilmer Cutler Pickering Hale and Dorr LLP.

At the Markman hearing, the Court, with the assistance of the parties, analyzed the claim terms in order to prepare jury instructions interpreting the pertinent claims at issue in the '483 patent. Additionally, the Court prepared a case glossary for terms found in the claims and specification for the '483 patent considered to be technical in nature which a jury of laypersons might not understand clearly without a specific definition.

After careful consideration of the parties' arguments and the applicable statutes and case law, the Court **HEREBY CONSTRUES** the claims in dispute for the '483 patent and **ISSUES** the relevant jury instructions as written in Exhibit A, attached hereto. Further, the Court **HEREBY DEFINES** all pertinent technical terms as written in Exhibit B, attached hereto.

IT IS SO ORDERED.

EXHIBIT A FN1

UNITED STATES PATENT NUMBER 5,568,483-CLAIM CHART

VERBATIM CLAIM LANGUAGE	COURT'S CONSTRUCTION
Claim 1	Claim 1
1. In a communication system, a method for transmitting a first data frame at a data rate included within a first predetermined data rate set of a set of rate sets, comprising the steps of:	1. In a communication system, a method for transmitting a first data frame [<i>a grouping of data that will be, or has been, formatted and encoded as a unit</i>] at a data rate [<i>the rate at which a datapath (for example, channel) carries data, measured in bits per second</i>] included within a first predetermined data rate set [<i>a number of things of the same kind that belong or are used together</i>] of a set of rate sets , comprising the steps of:
receiving said data frame;	receiving said data frame ;
generating a set of parity check bits and tail bits in accordance with a frame rate of said first data frame;	generating a set of parity check bits [<i>predetermined bits appended to an array of bits to detect errors in a block of data by making the sum of all the bits always odd or always even</i>] and tail bits [<i>bits inserted at the end of a group of bits (such as a frame) to increase the accuracy of decoding</i>] in accordance with a frame rate [<i>the number of frames transmitted or received per unit of time</i>] of said first data frame ;
encoding an augmented data frame derived from said first data frame,	encoding [<i>expressing in another form</i>] an augmented data frame derived from said first data frame , said parity check bits . and said

said parity check bits, and said tail bits, wherein an encoding rate of said encoding is determined in accordance with said first predetermined data rate set of said first data frame; and	<i>tail bits</i> , wherein an <i>encoding rate</i> [<i>the ratio of input bits into an encoder to output bits from the encoder</i>] of said encoding is determined in accordance with said first predetermined data rate set of said first data frame ; and
transmitting said encoded augmented data frame.	<i>transmitting</i> [<i>moving data from one location to another location</i>] said encoded augmented <i>data frame</i> .

Claim 2	Claim 2
2. The method of claim 1 further including the step of transmitting a second data frame at a selected data rate included within a second predetermined set of data rates, wherein there is a multiplicative factor between corresponding data rates of said first predetermined data rate set and said second predetermined data rate set.	2. The method of claim 1 further including the step of <i>transmitting</i> a second <i>data frame</i> at a selected <i>data rate</i> included within a second predetermined <i>set of data rates</i> , wherein there is a <i>multiplicative factor</i> [<i>a number constant by which a variable is multiplied</i>] between corresponding <i>data rates</i> of said first predetermined <i>data rate set</i> and said second predetermined <i>data rate set</i> .

Claim 3	Claim 3
3. The method of claim 2 wherein encoding rates associated with said first predetermined data rate set and said second predetermined data rate set are related by an encoding factor inversely proportional to said multiplicative factor.	3. The method of claim 2 wherein <i>encoding rates</i> associated with said first predetermined <i>data rate set</i> and said second predetermined <i>data rate set</i> are related by an encoding factor inversely proportional to said <i>multiplicative factor</i> .

Claim 4	Claim 4
4. In a communication system, a method for transmitting a first data frame at a given data rate included within a first predetermined set of data rates, comprising the steps of: receiving said first data frame and a frame rate indication associated therewith; generating a formatted data frame by formatting said first data frame in accordance with a predetermined format corresponding to said frame rate indication; encoding said formatted data frame; and transmitting said encoded formatted data frame.	4. In a communication system, a method for transmitting a first <i>data frame</i> at a given <i>data rate</i> included within a first predetermined <i>set of data rates</i> , comprising the steps of: receiving said first <i>data frame</i> and a <i>frame rate</i> indication associated therewith; generating a formatted <i>data frame</i> by formatting said first <i>data frame</i> in accordance with a predetermined format corresponding to said <i>frame rate</i> indication; <i>encoding</i> said formatted <i>data frame</i> ; and <i>transmitting</i> said encoded formatted <i>data frame</i> .

Claim 5	Claim 5
5. In a communication system, a method for transmitting first and second data frames at first and second data rates, respectively, said first and second data rates being respectively included first and second predetermined sets of data rates, comprising the steps of: receiving said first and second data frames and first and second frame rate indications respectively associated with said first and second data frames; generating first and second formatted data frames by formatting said first and second data frames in accordance with first and second predetermined	5. In a communication system, a method for transmitting first and second <i>data frames</i> at first and second <i>data rates</i> . respectively, said first and second <i>data rates</i> being respectively included first and second predetermined <i>sets of data rates</i> . comprising the steps of: receiving said first and second <i>data frames</i> and first and second <i>frame rate</i> indications respectively associated with said first and second <i>data frames</i> ; generating first and second formatted <i>data frames</i> by formatting said first and second <i>data frames</i> in accordance with first and second predetermined

formats corresponding to said first and second frame rate indications, respectively;	formats corresponding to said first and second <i>frame rate</i> indications, respectively;
encoding said first and second formatted data frames; and	<i>encoding</i> said first and second formatted <i>data frames</i> : and
transmitting said first and second encoded formatted data frames.	<i>transmitting</i> said first and second encoded formatted <i>data frames</i> .
Claim 6	Claim 6
6. In a communication system, a method for transmitting information from a subscriber unit to a base station comprising the steps of:	6. In a communication system, a method for transmitting information from a subscriber unit to a <i>base station</i> [<i>in a wireless communications system, any fixed station that communicates with mobile stations</i>] comprising the steps of:
providing a first data frame including traffic channel data of a first type;	providing a first <i>data frame</i> including <i>traffic channel data</i> [<i>data communicated on a traffic channel</i>] of a first type;
generating a formatted data frame of a predetermined format using said first data frame, said formatted data frame including at least one frame quality bit;	generating a formatted <i>data frame</i> of a predetermined format using said first <i>data frame</i> , said formatted <i>data frame</i> including at least one <i>frame quality bit</i> [<i>a bit whose purpose is to assess the quality of the frame</i>];
encoding said formatted data frame at an encoding rate based upon a frame rate associated with said first data frame; and	<i>encoding</i> said formatted <i>data frame</i> at an <i>encoding rate</i> based upon a <i>frame rate</i> associated with said first <i>data frame</i> ; and
transmitting said encoded formatted data frame.	<i>transmitting</i> said encoded formatted <i>data frame</i> .
Claim 7	Claim 7
7. The method of claim 6 further including the step of inserting at least one tail bit into said formatted data frame.	7. The method of claim 6 further including the step of inserting at least one <i>tail bit</i> into said formatted <i>data frame</i> .
Claim 8	Claim 8
8. The method of claim 6 further including the steps of:	8. The method of claim 6 further including the steps of:
providing a second data frame including traffic channel data of a second type, and	providing a second <i>data frame</i> including <i>traffic channel data</i> of a second type, and
generating said formatted data frame using both said first and said second data frame.	generating said formatted <i>data frame</i> using both said first and said second <i>data frame</i> .
Claim 9	Claim 9
9. The method of claim 6 wherein said first type of traffic channel data corresponds to primary traffic data.	9. The method of claim 6 wherein said first type of <i>traffic channel data</i> corresponds to <i>primary traffic data</i> [<i>data that typically includes user speech and/or other acoustic signals</i>].
Claim 10	Claim 10
10. The method of claim 8 wherein said first type of traffic channel data corresponds to primary traffic data, and wherein said second type of traffic channel data corresponds to secondary traffic data.	10. The method of claim 8 wherein said first type of <i>traffic channel data</i> corresponds to <i>primary traffic data</i> , and wherein said second type of <i>traffic channel data</i> corresponds to <i>secondary traffic data</i> [<i>data that typically includes user data that is not speech or acoustic signals</i>].
Claim 34	Claim 34
34. A transmitter for use in a	34. A transmitter for use in a communications system, said transmitter comprising:

communications system, said transmitter comprising:	
means for providing a first data frame including traffic channel data of a first type;	means for providing a first data frame including traffic channel data of a first type [<i>This is a means-plus-function limitation.</i> The function is providing a first data frame including traffic channel data of a first type. The corresponding structure is microphone 12, codec 16, and vocoder 14 shown in Figure I.];
means for generating a formatted data frame of a predetermined format using said first data frame, said formatted data frame including at least one frame quality bit;	means for generating a formatted data frame of a predetermined format using said first data frame , said formatted data frame including at least one frame quality bit [<i>This is a means-plus-function limitation.</i> The function is generating a formatted data frame of a predetermined format using said first data frame, said formatted data frame including at least one frame quality bit. The corresponding structure is microprocessor 18 and generator 20 shown in Figure J.];
means for encoding said formatted data frame at an encoding rate based upon a frame rate associated with said first data frame; and	means for encoding said formatted data frame at an encoding rate based upon a frame rate associated with said first data frame [<i>This is a means-plus-function limitation.</i> The function is encoding said formatted data frame at an encoding rate based upon a frame rate associated with said first data frame. The corresponding structure is a convolutional encoder]; and
means for transmitting said encoded formatted data frame.	means for transmitting said encoded formatted data frame [<i>This is a means-plus-function limitation.</i> The function is transmitting said encoded formatted data frame. The corresponding structure is convolutional encoder 22 shown in Figure 1 and as additional alternative corresponding structures convolutional encoder 23; block interleaver 24; 64-ary orthogonal modulator 26; gate 28; gate 34; gate 36; FIR filters 42, 44; delay element 48; D/A converter and anti-aliasing filter circuits 50, 52; quadrature modulator 54; R/F transmitter circuit 56; and antenna 58 shown in Figure 1.].
Claim 35	Claim 35
35. The transmitter of claim 34 further including means for inserting at least one tail bit into said formatted data frame.	35. The transmitter of claim 34 further including means for inserting at least one tail bit into said formatted data frame [<i>This is a means-plus-function limitation.</i> The function is inserting at least one tail bit into said formatted data frame. The corresponding structure is block 20 shown in Figure 1 and more specifically switch 66 within block 20 shown in Figure 3.].
Claim 36	Claim 36
36. The transmitter of claim 34 further including:	36. The transmitter of claim 34 further including:
means for providing a second data frame including traffic	means for providing a second data frame including traffic channel data of a second type [<i>This is a means-plus-function limitation.</i> The function is providing a second data frame including traffic channel data of a second type. The corresponding

channel data of a second type, and	<i>structure is microphone 12, codec 16, and vocoder 14 shown in Figure 1.</i>], and
means for generating said formatted data frame using both said first and said second data frame.	means for generating said formatted <i>data frame</i> using both said first and said second <i>data frame</i> [<i>This is a means-plus-function limitation. The function is generating said formatted data frame using both said first and said second data frame. The corresponding structure is microprocessor 18 and generator 20 shown in Figure 1.</i>].
Claim 37	Claim 37
37. The transmitter of claim 34 wherein said first type of traffic channel data corresponds to primary traffic data.	37. The transmitter of claim 34 wherein said first type of <i>traffic channel data</i> corresponds to <i>primary traffic data</i> .
Claim 38	Claim 38
38. The transmitter of claim 36 wherein said first type of traffic channel data corresponds to primary traffic data, and 15 wherein said second type of traffic channel data corresponds to secondary traffic data	38. The transmitter of claim 36 wherein said first type of <i>traffic channel data</i> corresponds to <i>primary traffic data</i> , and 15 wherein said second type of <i>traffic channel data</i> corresponds to <i>secondary traffic data</i>

EXHIBIT B

UNITED STATES PATENT NUMBER 5,568,483-GLOSSARY OF TERMS

TERM	DEFINITION
base station	in a wireless communications system, any fixed station that communicates with mobile stations
data frame	a grouping of data that will be, or has been, formatted and encoded as a unit
data rate	the rate at which a data path (for example, channel) carries data, measured in bits per second
encoding	expressing in another form
encoding rate	the ratio of input bits into an encoder to output bits from the encoder
frame quality bit	a bit whose purpose is to assess the quality of the frame
frame rate	the number of frames transmitted or received per unit of time
means for encoding said formatted data frame at an encoding rate based upon a frame rate associated with said first data frame	This is a means-plus-function limitation. The function is encoding said formatted data frame at an encoding rate based upon a frame rate associated with said first data frame. The corresponding structure is a convolutional encoder.
means for generating a formatted data frame of a predetermined format using said first data frame, said formatted data frame including at least one frame quality bit	This is a means-plus-function limitation. The function is generating a formatted data frame of a predetermined format using said first data frame, said formatted data frame including at least one frame quality bit. The corresponding structure is microprocessor 18 and generator 20 shown in Figure 1.
means for generating said formatted data frame using both said first and said	This is a means-plus-function limitation. The function is generating said formatted data frame using both said first and said second data frame. The corresponding structure is microprocessor 18 and generator 20 shown in Figure

second data frame	1.
means for inserting at least one tail bit into said formatted data frame	This is a means-plus-function limitation. The function is inserting at least one tail bit into said formatted data frame. The corresponding structure is block 20 shown in Figure 1 and more specifically switch 66 within block 20 shown in Figure 3.
means for providing a first data frame including traffic channel data of a first type	This is a means-plus-function limitation. The function is providing a first data frame including traffic channel data of a first type. The corresponding structure is microphone 12, codec 16, and vocoder 14 shown in Figure 1.
means for providing a second data frame including traffic channel data of a second type	This is a means-plus-function limitation. The function is providing a second data frame including traffic channel data of a second type. The corresponding structure is microphone 12, codec 16, and vocoder 14 shown in Figure 1.
means for transmitting said encoded formatted data frame	This is a means-plus-function limitation. The function is transmitting said encoded formatted data frame. The corresponding structure is convolutional encoder 22 shown in Figure 1 and as additional alternative corresponding structures convolutional encoder 23; block interleaver 24; 64-ary orthogonal modulator 26; gate 28; gate 34; gate 36; FIR filters 42, 44; delay element 48; D/A converter and anti-aliasing filter circuit 50, 52; quadrature modulator 54; R/F transmitter circuit 56; and antenna 58 shown in Figure 1.
multiplicative factor	a number constant by which a variable is multiplied
parity check bits	predetermined bits appended to an array of bits to detect errors in a block of data by making the sum of all the bits always odd or always even
primary traffic data	data that typically includes user speech and/or other acoustic signals
secondary traffic data	data that typically includes user data that is not speech or acoustic signals
set	a number of things of the same kind that belong or are used together
tail bits	bits inserted at the end of a group of bits (such as a frame) to increase the accuracy of decoding
traffic channel data	data communicated on a traffic channel
transmitting	moving data from one location to another location

FN1. All terms appearing in bold face type and underlined have been construed by the court and appear with their definitions in the glossary in Exhibit B. The definition for each construed term appears in italics after its first use in the patent.

S.D.Cal.,2006.

Qualcomm Inc. v. Broadcom Corp.

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