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

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

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

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said parity check bits, and said tail with said first predetermined data rate of said first data frame; and set of said first data frame; and

tail bits, wherein an encoding rate [the ratio of input bits into an bits, wherein an encoding rate of said *encoder to output bits from the encoder*] of said **encoding** is encoding is determined in accordance determined in accordance with said first predetermined data rate set

transmitting said encoded augmented	transmitting	[moving data from one location to another location]
data frame.	said encoded	augmented <i>data frame</i> .
Claim 2	Cla	im 2
2. The method of claim 1 further include	ding the 2. T	he method of claim 1 further including the step of
step of transmitting a second data frame at a tran		asmitting a second data frame at a selected data rate
selected data rate included within a sec	cond incl	uded within a second predetermined set of data rates,
predetermined set of data rates, wherei	in there is whe	erein there is a multiplicative factor [a number constant
a multiplicative factor between corresponding by v		<i>which a variable is multiplied</i>] between corresponding
data rates of said first predetermined data rate data		a rates of said first predetermined data rate set and said
set and said second predetermined data	a rate set. seco	ond predetermined data rate set.
Claim 3		Claim 3
3. The method of claim 2 wherein enco	oding rates	3. The method of claim 2 wherein <i>encoding rates</i>
associated with said first predetermined	d data rate set	associated with said first predetermined data rate set
and said second predetermined data rate	te set are	and said second predetermined <i>data rate set</i> are related
related by an encoding factor inversely	proportional	by an encoding factor inversely proportional to said
to said multiplicative factor.		multiplicative factor.
Claim 4		Claim 4
4. In a communication system, a method	od for	4. In a communication system, a method for
transmitting a first data frame at a give	en data rate	transmitting a first <i>data frame</i> at a given <i>data rate</i>
included within a first predetermined s	set of data	included within a first predetermined set of data rates,
rates, comprising the steps of:		comprising the steps of:
receiving said first data frame and a frame rate		receiving said first <i>data frame</i> and a <i>frame rate</i>
indication associated therewith;		indication associated therewith;
generating a formatted data frame by formatting said		I generating a formatted <i>data frame</i> by formatting said
first data frame in accordance with a predetermined		first <i>data frame</i> in accordance with a predetermined
format corresponding to said frame rate indication;		format corresponding to said <i>frame rate</i> indication;
encoding said formatted data frame; and		encoding said formatted data frame; and
transmitting said encoded formatted data frame.		transmitting said encoded formatted data frame.
Claim 5		Claim 5
5. In a communication system, a method	od for	5. In a communication system, a method for
transmitting first and second data frames at first and		transmitting first and second <i>data frames</i> at first and
second data rates, respectively, said first and second		second <i>data rates</i> . respectively, said first and second
data rates being respectively included first and		data rates being respectively included first and second
second predetermined sets of data rates, comprising		predetermined sets of data rates. comprising the steps
the steps of:		of:
receiving said first and second data frames and first		receiving said first and second <i>data frames</i> and first
and second frame rate indications respectively		and second <i>frame rate</i> indications respectively
associated with said first and second data frames;		associated with said first and second <i>data frames;</i>
generating first and second formatted data frames by generating first and second formatted data frame		generating first and second formatted <i>data frames</i> by
formatting said first and second data frames in		formatting said first and second <i>data frames</i> in
accordance with first and second predetermined		accordance with first and second predetermined

formats corresponding to said first and see	cond frame	formats corresponding to said first and second <i>frame</i>
rate indications, respectively;		<i>rate</i> indications, respectively;
encoding said first and second formatted data		encoding said first and second formatted data frames:
frames; and		and
transmitting said first and second encoded	l formatted	transmitting said first and second encoded formatted
data frames.		data frames.
Claim 6	Claim 6	х
6. In a communication system, a method	6. In a con	munication system, a method for transmitting
for transmitting information from a	information	n from a subscriber unit to a <i>base station</i> [<i>in a</i>
subscriber unit to a base station	wireless co	ommunications system, any fixed station that
comprising the steps of:	communica	<i>ites with mobile stations</i>] comprising the steps of:
providing a first data frame including	providing a	a first data frame including traffic channel data [data
traffic channel data of a first type;	communica	ated on a traffic channel] of a first type;
generating a formatted data frame of a	generating	a formatted <i>data frame</i> of a predetermined format
predetermined format using said first data	using said	first <i>data frame</i> , said formatted <i>data frame</i> including
frame, said formatted data frame	at least one	frame auality bit [a bit whose purpose is to assess
including at least one frame quality bit:	the quality	of the frame 1:
encoding said formatted data frame at an	encoding s	aid formatted <i>data frame</i> at an <i>encoding rate</i> based
encoding rate based upon a frame rate	upon a <i>fra</i>	<i>me rate</i> associated with said first <i>data frame</i> : and
associated with said first data frame: and	-pon -j	
transmitting said encoded formatted data	transmittin	ag said encoded formatted <i>data frame</i>
frame.		
Claim 7		Claim 7
7 The method of claim 6 further including	g the sten	7 The method of claim 6 further including the step of
of inserting at least one tail bit into said for	ormatted	inserting at least one <i>tail bit</i> into said formatted <i>data</i>
data frame.		frame.
Claim 8		Claim 8
8. The method of claim 6 further including	g the steps	8. The method of claim 6 further including the steps
of:		of:
providing a second data frame including traffic		providing a second <i>data frame</i> including <i>traffic</i>
channel data of a second type, and		channel data of a second type, and
generating said formatted data frame usin	g both said	generating said formatted <i>data frame</i> using both said
first and said second data frame.	-	first and said second <i>data frame</i> .
Claim 9 Cl	laim 9	· · · · ·
9. The method of claim 6 wherein said 9.	The method	d of claim 6 wherein said first type of <i>traffic channel</i>
first type of traffic channel data da	<i>ta</i> correspo	nds to primary traffic data [data that typically
corresponds to primary traffic data. in	cludes user	speech and/or other acoustic signals].
Claim 10	Claim 10	ř ř ř ř ř ř ř ř ř ř ř ř ř ř ř ř ř ř ř
10. The method of claim 8 wherein said	10. The n	nethod of claim 8 wherein said first type of <i>traffic</i>
first type of traffic channel data	channel (data corresponds to primary traffic data, and wherein
corresponds to primary traffic data, and	said seco	nd type of <i>traffic channel data</i> corresponds to
wherein said second type of traffic channel	el secondar	y traffic data [data that typically includes user data
data corresponds to secondary traffic data. that is not speech or acoustic signals].		
Claim 34 Claim 34	ļ	· · · ·
34. A transmitter for 34. A transmitter for	or use in a c	communications system, said transmitter comprising:
use in a		

communications	
system, said	
transmitter	
comprising:	
means for providing a	means for providing a first <i>data frame</i> including <i>traffic channel data</i> of a first type [
first data frame	This is a means-plus-function limitation. The function is providing a first data
including traffic	frame including traffic channel data of a first type. The corresponding structure is
channel data of a first	microphone 12, codec 16, and vocoder 14 shown in Figure 1.];
type;	
means for generating	means for generating a formatted <i>data frame</i> of a predetermined format using said
a formatted data	first <i>data frame</i> , said formatted <i>data frame</i> including at least one <i>frame quality bit</i>
frame of a	This is a means-plus-function limitation. The function is generating a formatted
predetermined format	data frame of a predetermined format using said first data frame, said formatted data
using said first data	frame including at least one frame quality bit. The corresponding structure is
frame, said formatted	microprocessor 18 and generator 20 shown in Figure J.];
data frame including	
at least one frame	
quality bit;	
means for encoding	means for <i>encoding</i> said formatted <i>data frame</i> at an <i>encoding rate</i> based upon a
said formatted data	frame rate associated with said first data frame [This is a means-plus-function
frame at an encoding	limitation. The function is encoding said formatted data frame at an encoding rate
rate based upon a	based upon a frame rate associated with said first data frame. The corresponding
frame rate associated	structure is a convolutional encoder]; and
with said first data	
frame; and	
means for transmitting	means for <i>transmitting</i> said encoded formatted <i>data frame</i> [This is a means-plus-
said encoded	function limitation. The function is transmitting said encoded formatted data frame.
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	35. The transmitter of claim 34 further including means for inserting at least one
claim 34 further	tail bit into said formatted data frame [This is a means-plus-function limitation.
including means for	The function is inserting at least one tail bit into said formatted data frame. The
inserting at least one ta	il corresponding structure is block 20 shown in Figure 1 and more specifically switch
bit into said formatted	66 within block 20 shown in Figure 3.].
data frame.	
Claim 36	Claim 36
36. The transmitter of	36. The transmitter of claim 34 further including:
claim 34 further	
including:	
means for providing a	means for providing a second <i>data frame</i> including <i>traffic channel data</i> of a second
second data frame	type [This is a means-plus-function limitation. The function is providing a second
including traffic	data frame including traffic channel data of a second type. The corresponding

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

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	This is a means-plus-function limitation. The function is encoding said
formatted data frame at an	formatted data frame at an encoding rate based upon a frame rate associated
encoding rate based upon a	with said first data frame. The corresponding structure is a convolutional
frame rate associated with	encoder.
said first data frame	
means for generating a	This is a means-plus-function limitation. The function is generating a
formatted data frame of a	formatted data frame of a predetermined format using said first data frame,
predetermined format	said formatted data frame including at least one frame quality bit. The
using said first data frame,	corresponding structure is microprocessor 18 and generator 20 shown in Figure
said formatted data frame	1.
including at least one	
frame quality bit	
means for generating said	This is a means-plus-function limitation. The function is generating said
formatted data frame using	formatted data frame using both said first and said second data frame. The
both said first and said	corresponding structure is microprocessor 18 and generator 20 shown in Figure

second data frame	1.
means for inserting at least	This is a means-plus-function limitation. The function is inserting at least
one tail bit into said	one tail bit into said formatted data frame. The corresponding structure is block
formatted data frame	20 shown in Figure 1 and more specifically switch 66 within block 20 shown in
	Figure 3.
means for providing a first	This is a means-plus-function limitation. The function is providing a first
data frame including	data frame including traffic channel data of a first type. The corresponding
traffic channel data of a	structure is microphone 12, codec 16, and vocoder 14 shown in Figure 1.
first type	
means for providing a	This is a means-plus-function limitation. The function is providing a second
second data frame	data frame including traffic channel data of a second type. The corresponding
including traffic channel	structure is microphone 12, codec 16, and vocoder 14 shown in Figure 1.
data of a second type	
means for transmitting	This is a means-plus-function limitation. The function is transmitting said
said encoded formatted	encoded formatted data frame. The corresponding structure is convolutional
data frame	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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