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)

May 2, 2006.

Adam Arthur Bier, Christian E. Mammen, James R. Batchelder, Day Casebeer Madrid and Batchelder, Kevin Kook Tai Leung, Law Office of Kevin Kook Tai Leung, Cupertino, CA, Barry Jerome Tucker, David E. Kleinfeld, Brandon Hays Pace, Heller Ehrman, James T. Hannink, Kathryn Bridget Riley, Randall Evan Kay, Brooke Beros, DLA Piper US, Heidi Maley Gutierrez, Higgs Fletcher and Mack, San Diego, CA, E. Joshua Rosenkranz, Heller Ehrman, Evan R. Chesler, Richard J. Stark, Cravath Swaine and Moore, Richard S. Taffet, Bingham McCutchen, New York, NY, Nitin Subhedar, Jaideep Venkatesan, Heller Ehrman, Menlo Park, CA, Jason A. Yurasek, Bingham McCutchen, San Francisco, CA, Patrick Taylor Weston, McCutchen Doyle Brown and Enersen, Walnut Creek, CA, William F. Abrams, Bingham McCutchen, East Palo Alto, CA, for Plaintiff.

Alejandro Menchaca, Andrew B. Karp, Brian C. Bianco, Christopher N. George, Consuelo Erwin, George P. McAndrews, Gregory C. Schodde, Joseph F. Harding, Lawrence M. Jarvis, Leonard D. Conapinski, Matthew A. Anderson, Ronald H. Spuhler, Scott P. McBride, Stephen F. Sherry, Thomas J. Wimbiscus, Jean Dudek Kuelper, McAndrews Held and Malloy, Chicago, IL, Allen C. Nunnally, Daniel M. Esrick, John J. Regan, John S. Rhee, Joseph F. Haag, Kate Saxton, Louis W. Tompros, Richard W. O'Neill, Stephen M. Muller, Vinita Ferrera, Wayne L. Stoner, William F. Lee, Wilmer Cutler Pickering Hale and Dorr, Boston, MA, James Sullivan McNeill, Robert S. Brewer, Jr., McKenna Long and Aldridge, San Diego, CA, James L. Quarles, III, William J. Kolasky, Wilmer Cutler Pickering Hale and Dorr, Alina D. Eldred, Mark W. Nelson, Steven J. Kaiser, Cleary Gottleib Steen and Hamilton, Washington, DC, Maria K. Vento, Mark D. Selwyn, Wilmer Cutler Pickering Hale and Dorr, Palo Alto, CA, for Defendant.

CLAIM CONSTRUCTION ORDER FOR UNITED STATES PATENT NUMBER 5,627,412

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

Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), on March 27-30, 2006, and April 3, 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 5,627,412 ("the BC '412 patent"). Plaintiff Qualcomm, Inc. was represented by the law firm of Heller Ehrman LLP, and Defendant Broadcom Corp. was represented by the law firm of McAndrews, Held & Malloy, Ltd.

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 BC '412 patent. Additionally, the Court prepared a case glossary for terms found in the claims and specification for the BC '412 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 BC '412 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

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.

UNITED STATES PATENT NUMBER 5***.627.412-CLAIM CHART***

VERBATIM CLAIM LANGUAGE	**COURT'S CONSTRUCTION**
Claim 1	**Claim 1**
1. A dynamically switchable power supply in an electronic system having varying power requirements, said dynamically switchable power supply comprising:	A ***dynamically switchable power supply*** [*a unit capable of supplying a power output that can be switched from one level to another during operation*] in an electronic system having varying power requirements, said dynamically switchable power supply ***comprising*** [*including but not limited to*]:
(a) a central processing unit, said central processing unit capable of operating at a plurality of voltages;	(a) a ***central processing unit*** [(***CPU***), *circuitry controlling the interpretation and execution of instructions*], said ***central processing unit*** capable of operating at a ***plurality*** [*two or more*] of voltages;
(b) a plurality of voltage converters, said plurality of voltage converters supplying a plurality of operational voltages to said central processing system and to the electronic system;	(b) a ***plurality*** of ***voltage converters*** [*a voltage converter is a circuit which is capable of converting an input voltage to a specified output voltage*], said ***plurality*** of ***voltage converters*** supplying a ***plurality*** of ***operational voltages*** [*voltage at which a particular electronic component operates*] to said ***central processing system*** [*i.e. central processing unit*] and to the electronic system;
(c) a frequency synthesizer, said frequency	(c) a ***frequency synthesizer*** [*a circuit capable of generating*

synthesizer providing a timing control signal of multiple variable frequencies to said central processing unit and to the electronic system; and	*two or more output frequencies from a reference frequency*], said ***frequency synthesizer*** providing a ***timing control signal*** [*a signal that controls the timing of the operation of electronic components*] of ***multiple variable frequencies*** [*two or more successive frequency values over time*] to said ***central processing unit*** and to the electronic system; and
(d) said central processing unit capable of dynamically switching the supply of operational voltages from said voltage converters and the timing control signal of said frequency synthesizer supplied to said central processing unit and to the electronic system wherein operational voltages and the timing control signals are selected according to the varying power requirements of the electronic system such that power consumption of the electronic system is minimized.	(d) said ***central processing unit*** capable of ***dynamically switching*** [*switching from one level to another during operation*] the supply of ***operational voltages*** from said ***voltage converters*** and the ***timing control signal*** **of said** ***frequency synthesizer*** supplied to said ***central processing unit*** and to the electronic system wherein ***operational voltages*** and the ***timing control signals*** are selected according to the varying power requirements of the electronic system such that ***power consumption of the electronic system is minimized*** [*power consumption is reduced to the lowest practicable level consistent with the current operating demands*].

Claim 2	**Claim 2**
2. The dynamically switchable power supply of claim 1 wherein said central processing unit is capable of operating at 5.0 volts.	2. The ***dynamically switchable power supply*** of claim 1 wherein said ***central processing unit*** is capable of operating at 5.0 volts.
Claim 3	**Claim 3**
3. The dynamically switchable power supply of claim 1 wherein said central processing unit is capable of operating at 3 .3 volts.	3. The ***dynamically switchable power supply*** of claim 1 wherein said ***central processing unit*** is capable of operating at 3.3 volts.
Claim 4	**Claim 4**
4. The dynamically switchable power supply of claim 1 wherein said central processing unit is capable of operating at 2.7 volts.	4. The ***dynamically switchable power supply*** of claim 1 wherein said ***central processing unit*** is capable of operating at 2.7 volts.
Claim 5	**Claim 5**
5. The dynamically switchable power supply of claim 1 wherein said plurality of voltage converters includes a 5.0 volt converter.	5. The ***dynamically switchable power supply*** of claim 1 wherein said ***plurality*** **of** ***voltage convertors*** includes a 5.0 ***volt convertor.***
Claim 6	**Claim 6**
6. The dynamically switchable power supply of claim 1 wherein said plurality of voltage converters includes a 3.3 volt converter.	6. The ***dynamically switchable power supply*** of claim 1 wherein said ***plurality*** of ***voltage convertors*** includes a 3.3 ***volt convertor.***
Claim 7	**Claim 7**
7. The dynamically switchable power supply of claim 1 wherein said plurality of voltage converters includes a 2.7 volt converter.	7. The ***dynamically switchable power supply*** of claim 1 wherein said ***plurality*** of ***voltage convertors*** includes a 2.7 ***volt convertor.***

Claim 11	**Claim 11**
11. A method of controlling a dynamically switchable power supply in an electronic system comprising:	11. A method of controlling a ***dynamically switchable power supply*** in an electronic system ***comprising:***

(a) nominally operating the system at a first operational voltage value and a first operational frequency value whereby the electronic system operates at a first power level;	(a) ***nominally operating the system*** [*operating the system according to its plan or design*] at a first ***operational voltage*** value and a first ***operational frequency*** [*frequency at which a particular electronic component operates*] value whereby the electronic system operates at a first power level;
(b) switching the operational voltage to a second voltage value and the operational frequency to a second frequency value upon a change in the required operational power whereby the electronic system operates at a second power level; and	(b) switching the ***operational voltage*** to a second voltage value and the ***operational frequency*** to a second frequency value upon a change in the required ***operational power*** [*power at which a particular electronic component operates*] whereby the electronic system operates at a second power level; and
(c) resetting the operational voltage to the first operational voltage value and the operational frequency to the first operational frequency value whereby the electronic system operates at the first power level.	(c) resetting me ***operational voltage*** to the first ***operational voltage*** value and the ***operational frequency*** to the first ***operational frequency*** value whereby the electronic system operates at the first power level.

Claim 12	**Claim 12**
12. The method or claim 11 further including the step of switching the operational voltage to a third voltage value and the operational frequency to a third frequency value upon a change in the required operational power whereby the electronic system operates at a third power level.	12. The method or claim 11 further including the step of switching the ***operational voltage*** to a third voltage value and the ***operational frequency*** to a third frequency value upon a change in the required operational power whereby the electronic system operates at a third power level.

Claim 13	**Claim 13**
13. The method of claim 11 wherein said switching step is controlled by a central processing unit.	13. The method of claim 11 wherein said switching step is controlled by a ***central processing unit.***

Claim 16	**Claim 16**
16. In a portable electronic device having electronic circuits operationally powered from a battery power source, a dynamically switchable power supply comprising:	16. In a portable electronic device having electronic circuits ***operationally powered*** from a battery power source, a ***dynamically switchable power supply comprising:***
(a) a battery for providing operational power to the electronic circuits of the portable electronic device;	(a) a battery for providing ***operational power*** to the electronic circuits of the portable electronic device;
(b) a first voltage converter operationally powered by said battery, said first voltage converter for providing a first regulated dc supply voltage to the electronic circuits of the portable electronic device;	(b) a first ***voltage converter operationally powered*** by said battery, said first ***voltage converter*** for providing a first ***regulated dc supply voltage*** [*output which is set and maintained at a substantially constant voltage*] to the electronic circuits of the portable electronic device;
(c) a second voltage converter operationally powered by said battery, said second voltage converter for providing a second	(c) a second ***voltage converter operationally powered*** by said battery, said second ***voltage converter*** for providing a second ***regulated dc supply voltage*** to the electronic circuits of the portable electronic device; and

regulated dc supply voltage to the electronic circuits of the portable electronic device; and	
(d) means for controlling said first and said second voltage converters wherein said first and said second voltage converters may be dynamically activated or deactivated such that the regulated dc supply voltage provided to the electronic circuits of the portable electronic device may be thereby selected to control the operational power provided by said battery to the electronic circuits of the portable electronic device.	(d) ***means for controlling said first and said second voltage converters*** [***This is a means plus function limitation.*** *The function of this limitation is controlling the first and second voltage converters. The corresponding structure is a CPU, a microprocessor, a microcontroller, or a digital signal processor or equivalents thereof*] wherein said first and said second ***voltage converters maybe dynamically activated or deactivated*** [*capable of being electronically activated or deactivated during operation*] such that the ***regulated dc supply voltage*** provided to the electronic circuits of the portable electronic device may be thereby selected to control the ***operational power*** provided by said battery to the electronic circuits of the portable electronic device.

Claim 17	**Claim 17**
17. The dynamically switchable power supply of claim 16 wherein said controlling means is a central processing unit operatively integrated with the electronic circuits of the portable electronic device.	17. The ***dynamically switchable power supply*** of claim 16 wherein said ***controlling means*** is a ***central processing unit operatively integrated*** [*included in a larger unit while permitting operation along with*] with the electronic circuits of the portable electronic device.

Claim 18	**Claim 18**
18. The dynamically switchable power supply of claim 17 wherein said central processing unit is capable of operating from at least two dc supply voltage levels.	18. The ***dynamically switchable power supply*** of claim 17 wherein said ***central processing unit*** is capable of operating from at least two dc supply voltage levels.

Claim 19	**Claim 19**
19. In a portable electronic device having electronic circuits operationally powered from a battery power source, a dynamically switchable power supply comprising:	19. In a portable electronic device having electronic circuits ***operationally powered*** from a battery power source, a ***dynamically switchable power supply comprising:***
(a) a battery for providing operational power to the electronic circuits of the portable electronic device;	(a) a battery for providing ***operational power*** to the electronic circuits of the portable electronic device;
(b) a frequency synthesizer for providing a variable driving frequency to the electronic circuits of the portable electronic device; and	(b) a ***frequency synthesizer*** for providing a ***variable driving frequency*** [*frequency that controls the timing of the operation of electronic components and that takes on successive values during operation*] to the electronic circuits of the portable electronic device; and
(c) means for controlling said frequency synthesizer wherein the variable driving frequency of said frequency synthesizer may be	(c) ***means for controlling said frequency synthesizer*** [***This is a means-plus-function limitation.*** *The function is controlling said frequency synthesizer. The corresponding structure is a CPU, a microprocessor, a microcontroller, or a digital signal processor or equivalents thereof*]

thereby dynamically adjusted to control the operational power provided by said battery to the electronic circuits of the portable electronic device.	wherein the ***variable driving frequency*** of said ***frequency synthesizer*** may be thereby ***dynamically adjusted*** [*adjusted during operation*] to control the ***operational power*** provided by said battery to the electronic circuits of the portable electronic device.

Claim 20	**Claim 20**
20. The dynamically switchable power supply of claim 19 wherein said controlling means is a central processing unit operatively integrated with the electronic circuits of the portable electronic device.	20. The ***dynamically switchable power supply*** of claim 19 wherein said ***controlling means*** is a ***central processing unit operatively integrated*** with the electronic circuits of the portable electronic device.

Claim 21	**Claim 21**
21. The dynamically switchable power supply of claim 20 wherein said central processing unit is capable of operating from at least two dc supply voltage levels.	21. The ***dynamically switchable power supply*** of claim 20 wherein said ***central processing unit*** is capable of operating from at least two dc supply voltage levels.

Claim 22	**Claim22**
22. In a portable electronic device having electronic circuits operationally powered from a battery power source, a dynamically switchable power supply comprising:	22. In a portable electronic device having electronic circuits ***operationally powered*** from a battery power source, a ***dynamically switchable power supply comprising:***
(a) a battery for providing operational power to the electronic circuits of the portable electronic device;	(a) a battery for providing ***operational power*** to the electronic circuits of the portable electronic device;
(b) a first voltage converter operationally powered by said battery, said first voltage converter for providing a first regulated dc supply voltage to the electronic circuits of the portable electronic device;	(b) a first ***voltage converter operationally powered*** by said battery, said first ***voltage converter*** for providing a first ***regulated dc supply voltage*** to the electronic circuits of the portable electronic device;
(d) a frequency synthesizer for providing a variable driving frequency to the electronic circuits of the portable electronic device; and	(d) a ***frequency synthesizer*** for providing a ***variable driving frequency*** to the electronic circuits of the portable electronic device; and
(e) means for controlling said first and said second voltage converters and said frequency synthesizer wherein said first and said second voltage converters may be dynamically activated or deactivated such that the regulated dc supply voltage provided to the electronic circuits of the portable electronic device may be thereby selected and wherein the variable driving frequency of said frequency synthesizer may be thereby dynamically adjusted to control the operational power provided by said battery to the electronic	(e) ***means for controlling said first and said second voltage converters and said frequency synthesizer*** [***This is a means plus function limitation.*** *The function of this limitation is controlling the first and second voltage converters and the frequency synthesizer. The corresponding structure is a CPU, a microprocessor, a microcontroller, or a digital signal processor or equivalents thereof*] wherein said first and said second ***voltage converters may be dynamically activated or deactivated*** such that the ***regulated dc supply voltage*** provided to the electronic circuits of the portable electronic device may be thereby selected and wherein the ***variable driving frequency*** of said ***frequency synthesizer*** may be thereby ***dynamically adjusted*** to control the ***operational power*** provided by said battery to the electronic

circuits of the portable electronic device.	circuits of the portable electronic device.
Claim 23	**Claim 23**
23. The dynamically switchable power supply of claim 22 wherein said controlling means is a central processing unit operatively integrated with the electronic circuits of the portable electronic device.	23. The ***dynamically switchable power supply*** of claim 22 wherein said ***controlling means*** is a ***central processing unit operatively integrated*** with the electronic circuits of the portable electronic device.
Claim 24	**Claim 24**
24. The dynamically switchable power supply of claim 23 wherein said central processing unit is capable of operating from at least two dc supply voltage levels.	24. The ***dynamically switchable power supply*** of claim 23 wherein said ***central processing unit*** is capable of operating from at least two dc supply voltage levels.

EXHIBIT B

UNITED STATES PATENT NUMBER 5,627,412***-GLOSSARY OF TERMS***

TERM	***DEFINITION***
central processing system	central processing unit
central processing unit	(**CPU**), circuitry controlling the interpretation and execution of instructions
CPU	central processing unit
controlling means (in Claim 17)	See definition of "**means for controlling said first and said second voltage converters.**"
controlling means (in Claim 20)	See definition of "**means for controlling said frequency synthesizer.**"
controlling means (in Claim 23)	See definition of "**means for controlling said first and said second voltage converters and said frequency synthesizer.**"
dynamically adjusted	adjusted during operation
dynamically switchable power supply	a unit capable of supplying a power output that can be switched from one level to another during operation
dynamically switching	switching from one level to another during operation
frequency synthesizer	a circuit capable of generating two or more output frequencies from a reference frequency
may be dynamically activated or deactivated	capable of being electronically activated or deactivated during operation
means for controlling said first and said second voltage converters	This is a means plus function limitation. The function of this limitation is controlling the first and second voltage converters. The corresponding structure is a CPU, a microprocessor, a microcontroller, or a digital signal processor or equivalents thereof.
means for controlling said first and said second voltage converters and said frequency synthesizer	This is a means plus function limitation. The function of this limitation is controlling the first and second voltage converters and the frequency synthesizer. The corresponding structure is a CPU, a microprocessor, a microcontroller, or a digital signal processor or equivalents thereof.
means for controlling said frequency synthesizer	This is a means-plus-function limitation. The function is controlling said frequency synthesizer. The corresponding structure is a CPU, a microprocessor, a microcontroller, or a digital signal processor or equivalents thereof.

multiple variable frequencies	two or more successive frequency values over time
nominally operating the system	operating the system according to its plan or design
operational frequency	frequency at which a particular electronic component operates
operational power	power at which a particular electronic component operates
operationally powered	See definition of "**operational power.**"
operational voltages	voltage at which a particular electronic component operates
operatively integrated	included in a larger unit while permitting operation along with
plurality	two or more
power consumption of the electronic system is minimized	power consumption is reduced to the lowest practicable level consistent with the current operating demands
regulated dc supply voltage	output which is set and maintained at a substantially constant voltage
timing control signal	a signal that controls the timing of the operation of electronic components
variable driving frequency	frequency that controls the timing of the operation of electronic components and that takes on successive values during operation
voltage converters	a voltage converter is a circuit which is capable of converting an input voltage to a specified output voltage

S.D.Cal.,2006.
Qualcomm Inc. v. Broadcom Corp.