

United States District Court,  
S.D. California.

**QUALCOMM INCORPORATED,**  
Plaintiff.

v.

**MAXIM INTEGRATED PRODUCTS, INC,**  
Defendants.

No. 02CV2429-B(JFS)

**Dec. 2, 2004.**

Daniel J. Krueger, Conley Rose, Houston, TX, James R. Batchelder, Day Casebeer Madrid and Batchelder, Cupertino, CA, for Plaintiff.

Barbara A. Bailey, Charles A. Blanchard, Jerod E. Tufte, Brown and Bain, Chad S. Campbell, Michael F. Bailey, Perkins Coie Brown and Bain, Phoenix, AZ, Mark C. Mazzarella, Mazzarella Caldarelli, San Diego, CA, for Defendants.

**ORDER CONSTRUING CLAIMS FOR UNITED STATES PATENT NUMBER 5,590,408**

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

Plaintiff, Qualcomm, Inc. has brought suit against Defendant, Maxim Integrated Products, Inc., for infringement of United States Patent number 5,590,408 (the " '408 Patent"). Pursuant to *Markman v. Westview Instruments*, 52 F.3d 967 (Fed.Cir.1995), the Court conducted a hearing on August 16-19 and October 4-7 and 13-14, 2004 to construe the disputed claim terms of the '408 Patent. FN1 At the hearing, Qualcomm was represented by the law firm of Day, Casebeer, Madrid & Batchelder, and Maxim was represented by the firm of Perkins, Coie, Brown & Bain.

FN1. The disputed claims of the '408 Patent are claims 1, 5 and 6.

The Court, with the assistance of the parties, interpreted the pertinent terms for all claim terms at issue in the '408 Patent. Additionally, a "Glossary" was prepared for terms found in the '408 Patent, that were considered to be technical in nature and which a jury of laypersons might not understand without a specific definition. As the case advances, the parties may request additional terms to be added to the glossary as may seem helpful to the jury.

After careful consideration of the parties' arguments and the applicable law, the Court **HEREBY CONSTRUES** all disputed claim terms in the '408 Patent, attached as Exhibit A. Further, the Court **HEREBY DEFINES** all pertinent technical terms as written in Exhibit B, attached hereto.

**IT IS SO ORDERED**

**EXHIBIT A-UNITED STATES PATENT NUMBER 5.590.408-CLAIM CHART**

<b>VERBATIM CLAIM LANGUAGE</b>	<b>COURT'S CLAIM CONSTRUCTION</b>
<b>Claim 1</b>	<b>Claim 1</b>
A method for limiting transmit power of a radio operating in a radio communications system, the radio communications system comprising at least one base station that transmits signals including power control commands to the radio, the radio comprising a variable gain amplifier and a maximum gain setting, the method comprising the steps of:	A method for limiting <b>transmit power of a radio [level of power transmitted by the radio]</b> operating in a <b>radio communications system [a system of wireless telecommunications by means of radio waves]</b> , the radio communications system comprising at least one <b>base station [in a wireless communications system, any fixed station that communicates with mobile stations]</b> that transmits signals including <b>power control commands [commands from the base station instructing the radio to turn up or turn down power]</b> to the radio, the radio comprising a <b>variable gain amplifier [a unidirectional device that is capable of enlarging the waveform supplied to it, where the enlargement can be changed over a range, either continuously or in incremental steps]</b> and a <b>maximum gain setting [upper limit on the gain setting]</b> , the method comprising the steps of:
determining an open loop power control value in response to a signal received from the at least one base station;	determining an open loop <b>power control value [the value of the automatic gain control setpoint (the setpoint generated by a control circuit that is used for automatically changing the gain of a receiver or transmitter) ]</b> in response to a signal received from the at least one <b>base station [in a wireless communications system, any fixed station that communicates with mobile stations]</b> ;
determining a gain adjust signal in response to the transmitted power control commands;	determining a <b>gain adjust signal [a signal that can be used to change the gain of the variable gain amplifier]</b> in response to the transmitted <b>power control commands [commands from the base station instructing the radio to turn up or turn down power]</b> ;
combining the open loop power control value and the gain adjust signal to produce a summation signal;	combining the open loop <b>power control value [the value of the automatic gain control setpoint (the setpoint generated by a control circuit that is used for automatically changing the gain of a receiver or transmitter) ]</b> and the <b>gain adjust signal [a signal that can be used to change the gain of the variable gain amplifier]</b> to produce a summation signal <b>[a signal that represents the sum of two or more other signals]</b> ;
comparing the summation signal to the maximum gain setting;	comparing the summation signal to the <b>maximum gain setting [upper limit on the gain setting]</b> ;
if the summation signal is greater than or equal to the maximum gain setting, adjusting the variable gain amplifier in response to the maximum gain setting; and	if the summation signal is greater than or equal to the <b>maximum gain setting [upper limit on the gain setting]</b> , adjusting the variable gain amplifier in response to the maximum gain setting; and

<p>if the summation signal is less than the maximum gain setting, adjusting the variable gain amplifier in response to the summation signal.</p>	<p>if the summation signal is less than the maximum gain setting, adjusting the variable gain amplifier in response to the summation signal.</p>
<p><b>Claim 5</b></p>	<p><b>Claim 5</b></p>
<p>A method for limiting transmit power of a radio operating in a cellular environment, the cellular environment comprising a plurality of cells that transmit power control commands to the radio, the radio comprising a variable gain amplifier, a maximum gain setting, and a power limiting accumulator, the method comprising the steps of:</p>	<p>A method for limiting <b>transmit power of a radio [level of power transmitted by the radio]</b> operating in a <b>cellular environment [a system of wireless communications by means of radio waves]</b>, the cellular environment comprising a <b>plurality [two or more] of cells [cell means a base station (in a wireless communications system, any fixed station that communicates with mobile stations) and the geographic area defined by its transmission range]</b> that transmit power control commands [commands from the base station instructing the radio to turn up or turn down power] to the radio, the radio comprising a variable gain amplifier, a <b>maximum gain setting [upper limit on the gain setting]</b>, and a <b>power limiting accumulator [a device that accumulates a sum that can be used for limiting the <i>transmit power of a radio</i>]</b>, <i>the method comprising [including but not limited to] the steps of:</i></p>
<p>the variable gain amplifier transmitting a signal;</p>	<p>the <b>variable gain amplifier [a unidirectional device that is capable of enlarging the waveform supplied to it, where the enlargement can be changed over a range, either continuously or in incremental steps]</b> transmitting a signal;</p>
<p>determining a gain adjust signal in response to the transmitted power control commands;</p>	<p>determining a <b>gain adjust signal [a signal that can be used to change the gain of the variable gain amplifier]</b> in response to the transmitted <b>power control commands [commands from the base station instructing the radio to turn up or turn down power]</b>;</p>
<p>detecting a power value of the transmitted signal;</p>	<p>detecting a <b>power value of the transmitted signal [a power level of the transmitted signal just before the transmitted signal leaves the radio]</b>;</p>
<p>digitizing the power value;</p>	<p><b>digitizing (converting an analog signal to a digital signal)</b> the power value;</p>
<p>comparing the digitized power value to the maximum gain setting;</p>	<p>comparing the digitized power value to the <b>maximum gain setting [upper limit on the gain setting]</b>;</p>
<p>if the digitized power value is greater than the maximum gain setting, decreasing the gain of the variable gain amplifier; and</p>	<p>if the digitized power value is greater than the <b>maximum gain setting [upper limit on the gain setting]</b>, decreasing the gain of the variable gain amplifier; and</p>
<p>if the digitized power value is greater than the maximum gain setting, prohibiting the gain adjust signal from increasing in response to the transmitted</p>	<p>if the digitized power value is greater than the <b>maximum gain setting [upper limit on the gain setting]</b>, prohibiting the <b>gain adjust signal [a signal that can be used to change the gain of the variable gain amplifier]</b> from increasing in response to the transmitted <b>power control commands [commands from the base station instructing the radio to turn up or turn down power]</b>.</p>

power control commands.	
<b>Claim 6</b>	<b>Claim 6</b>
A method for limiting transmit power of a radio operating in a cellular environment, the cellular environment comprising a plurality of cells that transmit power control commands to the radio, the radio comprising a variable gain amplifier, a maximum gain setting, and a power control command accumulator that generates a gain adjust signal, the method comprising the steps of:	A method for limiting <b>transmit power of a radio [level of power transmitted by the radio]</b> operating in a <b>cellular environment [a system of wireless communications by means of radio waves]</b> , the cellular environment comprising a plurality of <b>cells [cell means a base station (in a wireless communications system, any fixed station that communicates with mobile stations) and the geographic area defined by its transmission range]</b> that transmit <b>power control commands [commands from the base station instructing the radio to turn up or turn down power]</b> to the radio, the radio comprising a <b>variable gain amplifier [a unidirectional device that is capable of enlarging the waveform supplied to it, where the enlargement can be changed over a range, either continuously or in incremental steps]</b> , a maximum gain setting, and a <b>power control command accumulator [a device which maintains the sum of power control values]</b> that generates a gain adjust signal, the method comprising the steps of:
the variable gain amplifier transmitting a signal;	the <b>variable gain amplifier [a unidirectional device that is capable of enlarging the waveform supplied to it, where the enlargement can be changed over a range, either continuously or in incremental steps]</b> transmitting a signal;
determining the gain adjust signal in response to the transmitted power control commands;	determining the <b>gain adjust signal [a signal that can be used to change the gain of the variable gain amplifier]</b> in response to the <b>transmitted power control commands [commands from the base station instructing the radio to turn up or turn down power]</b> ;
detecting a power value of the transmitted signal;	detecting a <b>power value of the transmitted signal [a power level of the transmitted signal just before the transmitted signal leaves the radio]</b> ;
digitizing the power value;	<b>digitizing [converting an analog signal to a digital signal]</b> the power value;
comparing the digitized power value to the maximum gain setting;	comparing the digitized power value to the <b>maximum gain setting [upper limit on the gain setting]</b> ;
if the digitized power value is greater than the maximum gain setting, decreasing the gain adjust signal by a predetermined amount for every predetermined unit of time until the gain adjust signal is less than the maximum gain setting; and	if the digitized power value is greater than the maximum gain setting, decreasing the gain adjust signal by a predetermined amount for every predetermined unit of time until the gain adjust signal is less than the maximum gain setting; and
if the digitized power value is less than or equal to the maximum gain setting, varying the gain of the variable gain amplifier in	if the digitized power value is less than or equal to the maximum gain setting, varying the gain of the variable gain amplifier in response to the gain adjust signal.

response to the gain adjust signal.

**EXHIBIT B-GLOSSARY RE: UNITED STATES PATENT NUMBER 5,590,408**

<b>TERM</b>	<b>DEFINITION</b>
Base station	In a wireless communications system, any fixed station that communicates with mobile stations
Cells	Cell means a base station (in a wireless communications system, any fixed station that communicates with mobile stations) and the geographic area defined by its transmission range
Cellular environment	A system of wireless communications by means of radio waves
Comprising	Including but not limited to
Digitizing	Converting an analog signal to a digital signal
Gain	The ratio of output signal power to input signal power
Gain adjust signal	A signal that can be used to change the gain of the variable gain amplifier
Maximum gain setting	Upper limit on the gain setting
Open loop power control value	The value of the automatic gain control setpoint
Plurality	Two or more
Power control command accumulator	A device which maintains the sum of power control values
Power control commands	Commands from the base station instructing the radio to turn up or turn down power
Power control value	The value of the automatic gain control setpoint (the setpoint generated by a control circuit that is used for automatically changing the gain of a receiver or transmitter)
Power limiting accumulator	A device that accumulates a sum that can be used for limiting the transmit power of a radio
A power value of the transmitted signal	A power level of the transmitted signal just before the transmitted signal leaves the radio
Radio	A transmitter, receiver, or transceiver used for communication via electromagnetic waves
Radio communications system	A system of wireless telecommunications by means of radio waves
Summation signal	A signal that represents the sum of two or more other signals
Transmit power of a radio	Level of the power transmitted by the radio
Variable gain amplifier	A unidirectional device that is capable of enlarging the waveform supplied to it, where the enlargement can be changed over a range, either continuously or in incremental steps

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