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. 05CV1958-B(BLM)

May 1, 2006.

CLAIM CONSTRUCTION ORDER FOR UNITED STATES PATENT NUMBER 5,576,767

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

Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), on February 7-9, 2006, and March 14-16, 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 5,576,767 ("the '767 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 '767 patent. Additionally, the Court prepared a case glossary for terms found in the claims and specification for the '767 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 '767 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 5,576,767-CLAIM CHART

VERBATIM CLAIM LANGUAGE	**COURT'S CONSTRUCTION**
Claim 1	**Claim 1**
1. An interframe video compression system comprising:	An ***interframe video compression system*** [*a system capable of reducing the amount of data used to represent a video frame with reference to the data used to represent one or more other video frames*] ***comprising*** [*including, but not limited to*]:
a first motion predictor having an input for receiving a block of pixel data and having an output for providing a first image prediction;	a first ***motion predictor*** [*an element capable of finding a block in one or more video frames that is similar to a block in another video frame*] having an input for receiving a ***block of pixel data*** [*a set of values specifying the brightness and/or color of pixels in a rectangular array of pixels. A pixel is a contraction of "picture element," the smallest addressable element in an electronic display.*] and having an output for providing a first ***image prediction*** [*data indicating for a particular block of a video frame, which block(s) of one or more other video frames are similar*];
a first distortion calculator having a first input for receiving said block of pixel data and having a second input for receiving said first image prediction and having an output for providing a first distortion value;	a first ***distortion calculator*** [*an element capable of calculating distortion. Distortion is a measure of the closeness of the match between two data sets.*] having a first input for receiving said ***block of pixel data*** and having a second input for receiving said first ***image prediction*** and having an output for providing a first ***distortion value*** [*a value quantifying the extent of distortion present*];
at least one additional motion predictor provided in parallel with said first motion predictor having an input for receiving said block of pixel data and having an output for providing additional image predictions;	at least one additional motion predictor ***provided in parallel with*** [*provided to operate independently and in the same step of the process and before the comparison is made*] said first ***motion predictor*** having an input for receiving said ***block of pixel data*** and having an output for providing additional ***image predictions;***
a second distortion calculator having a first input for receiving said block of pixel data and having a second input for receiving said additional image predictions and having a first output for providing a second distortion value;	a second ***distortion calculator*** having a first input for receiving said ***block of pixel data*** and having a second input for receiving said additional ***image predictions*** and having a first output for providing a second ***distortion value;***
an encoding format selector having a first input coupled to said first distortion calculator output and having a second input coupled to said second distortion calculator output and having an output for providing a selected encoding	an ***encoding format selector*** [*an element capable of selecting an encoding format. An encoding format is a specification of which data associated with the image predictions are to be used in assembling a frame*] having a first input coupled to said first ***distortion calculator*** output and having a second input coupled to said second ***distortion calculator*** output and having an output for

format; and	providing a selected ***encoding format;*** and
encoder having a first input coupled to said encoding format selector output and having an output for providing a selectively encoded residual frame, having a second input for receiving a first displaced frame difference generated in accordance with said first image prediction and having a third input for receiving a second displaced frame difference generated in accordance with said second image prediction and for selectively encoding said first displaced frame difference and said second displaced frame difference in accordance with said selected encoding format.	***encoder*** [*an element capable of expressing one form of data in another form, including but not limited to compression*] having a first input coupled to said ***encoding format selector*** output and having an output for providing a selectively encoded ***residual frame*** [*data remaining after a predicted frame has been subtracted from a current frame of data*], having a second input for receiving a first ***displaced frame difference*** [*the result of subtracting a block in a reference frame from a block in a current frame, or the result of subtracting a predicted frame from a current frame*] generated in accordance with said first ***image prediction*** and having a third input for receiving a second ***displaced frame difference*** generated in accordance with said second ***image prediction*** and for selectively encoding said first ***displaced frame difference*** and said second ***displaced frame difference*** in accordance with said selected ***encoding format.***
Claim 2	**Claim 2**
2. The system of claim 1 wherein said first motion predictor compares an N x N block of pixel data, where N is an integer, with N x N blocks of pixel data in a first reference block of data.	2. The system of claim 1 wherein said first ***motion predictor*** compares an N x N block of ***pixel data,*** where N is an ***integer*** [*a whole number as opposed to a fraction*], with N x N ***blocks of pixel data*** in a first ***reference block*** [*a block of data from a previous frame or a combination of blocks of data from previous frames of data from which a most similar block of pixel data is selected*] of data.
Claim 5	**Claim 5**
5. The system of claim 1 wherein said first motion predictor has a second input for receiving a first reference block of data comprising pixel data from a previous frame of pixel data.	The system of claim 1 wherein said first ***motion predictor*** has a second input for receiving a first ***reference block*** of data comprising ***pixel data*** [*values specifying the brightness and/or color of one or more pixels*].
Claim 6	**Claim 6**
6. The system of claim 1 wherein said first motion predictor has a second input for receiving a combination block of data determined in accordance with previous frames of pixel data.	6. The system of claim 1 wherein said first ***motion predictor*** has a second input for receiving a ***combination block of data*** [*a block of data from previous frames of data or previous blocks of data*] determined in accordance with previous frames of ***pixel data.***
Claim 7	**Claim 7**
7. The system of claim 1 wherein said first motion predictor has a second output for providing a first motion vector.	7. The system of claim 1 wherein said first ***motion predictor*** has a second output for providing a first ***motion vector*** [*a value or set of values used for motion compensation that provides an offset from the coordinate position in the current frame to the coordinates of a block in one or more reference frames*].
Claim 8	**Claim 8**
8. The system of claim 1 wherein said at least one additional motion predictor has a second output for providing additional	8. The system of claim 1 wherein said at least one additional ***motion predictor*** has a second output for providing additional ***motion vectors.***

motion vectors.	
Claim 9	**Claim 9**
9. The system of claim 1 further comprising a weighting value multiplier disposed between said first distortion calculator and said encoding format selector.	9. The system of claim 1 further ***comprising*** a ***weighting value multiplier*** [*an element capable of multiplying the output of the first distortion calculator by a cost factor*] disposed between said first ***distortion calculator*** and said ***encoding format selector.***
Claim 18	**Claim 18**
18. An interframe video compression method for compressing a block of video data comprising the steps of:	18. An ***interframe video compression*** method for compressing a ***block of video data*** [*a set of values representing a rectangular array of pixels of a video image*] ***comprising*** the steps of:
comparing said block of video data with blocks of pixel data of a first block size to provide displaced frame difference (DFD) locks;	comparing said ***block of video data*** with ***blocks of pixel data*** of a first block size to provide ***displaced frame difference*** (DFD) blocks;
measuring distortion values for said DFD blocks;	measuring ***distortion values*** for said *DFD* blocks;
selecting a most similar block of pixel data of said first block size in accordance with said distortion values to provide a first motion vector, a first DFD block and a first distortion value;	selecting a most similar ***block of pixel data*** of said first block size in accordance with said ***distortion values*** to provide a first ***motion vector,*** a first ***DFD*** block and a first ***distortion value;***
comparing said block of video data with a plurality blocks of pixel data of a second block size to provide additional DFD blocks;	***comparing said block of video data with a plurality blocks of pixel data of a second block size to provide additional DFD blocks*** [*this limitation operates independently and in the same step of the process as 18a before the selection of 18g is made*];
measuring distortion values for said DFD blocks;	measuring ***distortion values*** for said *DFD* blocks;
selecting a set of most similar block of pixel data of said second block size in accordance with said distortion values for said additional DFD blocks to provide a set of additional motion vectors, a set of additional DFD blocks and a second distortion value;	selecting a set of most similar ***block of pixel data*** of said second block size in accordance with said ***distortion values*** for said additional ***DFD*** blocks to provide a set of additional ***motion vectors,*** a set of additional ***DFD*** blocks and a second ***distortion value:***
selecting an encoding format in accordance with said first distortion value and said second distortion value; and	selecting an ***encoding format*** in accordance with said first ***distortion value*** and said second ***distortion value;*** and
selectively encoding said first motion vector and said first DFD block and said set of additional motion vectors and said set of additional DFD blocks in accordance with said selected encoding format.	selectively encoding said first ***motion vector*** and said first ***DFD*** block and said set of additional ***motion vectors*** and said set of additional ***DFD*** blocks in accordance with said selected ***encoding format.***
Claim 19	**Claim 19**

19. The method of claim 18 wherein said block of video data is an N x N block, where N is an integer, and wherein said first block size is N x N.	19. The method of claim 118 wherein said ***block of video data*** is an N x N block, where N is an ***integer,*** and wherein said first block size is ***N x N*** [*N pixels across and N pixels down*].
Claim 21	**Claim 21**
21. The method of claim 19 wherein said second block size is N/2 x N/2.	21. The method of claim 19 wherein said second block size is N/2 x N/2.
Claim 22	**Claim 22**
22. The method of claim 18 wherein said blocks of pixel data of a first block size comprise pixel data from a previous frame of video data.	22. The method of claim 18 wherein said ***blocks of pixel data*** of a first block size comprise ***pixel data*** from a previous frame of video data.
Claim 23	**Claim** 23
23. The method of claim 18 wherein said blocks of pixel data of a first block size are combinations of blocks of data from previous frames of video data.	23. The method of claim 18 wherein said ***blocks of pixel data*** of a first block size are combinations of blocks of data from previous frames of video data.
Claim 24	**Claim 24**
24. The method of claim 18 further comprising the step of weighting said additional distortion value by a predetermined weighting format .	24. The method of claim 18 further comprising the step of weighting said additional ***distortion value*** by a ***predetermined weighting format*** [*a specification, decided on before beginning the method, for scaling a distortion value using a cost factor*].

EXHIBIT B

UNITED STATES PATENT NUMBER 5,576,767-GLOSSARY OF TERMS

TERM	*DEFINITION*
Block of pixel data	A set of values specifying the brightness and/or color of pixels in a rectangular array of pixels
Block of video data	A set of values representing a rectangular array of pixels of a video image
Combination block of data	A block of data from previous frames of data or previous blocks of data
Comparing said block of video data with a plurality blocks of pixel data of a second block size to provide additional DFD blocks	This limitation operates independently and in the same step of the process as 18a before the selection of 18g is made.
Comprising	Including, but not limited to
DFD	Displaced frame difference
Displaced frame difference	The result of subtracting a block in a reference frame from a block in a current frame, or the result of subtracting a predicted frame from a current frame
Distortion	A measure of the closeness of the match between two data sets
Distortion calculator	An element capable of calculating distortion
Distortion value	A value quantifying the extent of distortion present

Encoder	An element capable of expressing one form of data to another form, including but not limited to compression
Encoding format	A specification of which data associated with the image predictions are to be used in assembling a frame
Encoding format selector	An element capable of selecting an encoding format
Image prediction	Data indicating, for a particular block of a video frame, which block(s) of one or more other video frames are similar
Integer	A whole number as opposed to a fraction
Interframe video compression system	A system capable of reducing the amount of data used to represent a video frame with reference to the data used to represent one or more other video frames
Motion predictor	An element capable of finding a block in one or more video frames that is similar to a block in another video frame
Motion vector	A value or set of values used for motion compensation that provides an offset from the coordinate position in the current frame to the coordinate of a block in one or more reference frames
N x N	*N* pixels across and *N* pixels down
Pixel	A contraction of "picture element," the smallest addressable element in an electronic display
Pixel data	Values specifying the brightness and/or color of one or more pixels
Provided in parallel with	Provided to operate independently and in the same step of the process and before the comparison is made
Predetermined weighting format	A specification, decided on before beginning the method, for scaling a distortion value using a cost factor
Reference block	A block of data from a previous frame or a combination of blocks of data from previous frames of data from which a most similar block of pixel data is selected
Residual frame	Data remaining after a predicted frame has been subtracted from a current frame of data
Weighting value multiplier	An element capable of multiplying the output of the first distortion calculator by a cost factor

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