UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

MULTIMEDIA PATENT TRUST, Plaintiff, vs. DIRECTV, Inc., et al., Defendants.	CASE NO. 09-CV-278 H (CAB) **TENTATIVE CLAIM CONSTRUCTION ORDER FOR UNITED STATES PATENT NUMBER 5,227,878, PATENT NUMBER 5,136,377, PATENT NUMBER 5,500,678, AND PATENT NUMBER 4,958,226**

On August 2, 2011, Plaintiff Multimedia Patent Trust and Defendants DirecTV, Inc. and Vizio, Inc. submitted their opening claim construction briefs. (Doc. Nos. 414-16.) After due consideration of the parties' briefing, the Court issues the following tentative claim construction order.

Claim Construction – Legal Standard

The "bedrock principle" of patent law is that the "claims of a patent define the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005). In construing claim terms, a court must determine the meaning of any disputed words from the perspective of one of ordinary skill in the pertinent art at the time of filing. Phillips, 415 F.3d at 1313.

The baseline for the analysis in claim construction is the "ordinary and customary meaning" of the claim term. Phillips, 415 F.3d at 1312-13. However, the "ordinary and customary meaning" phrase itself has a specialized meaning in patent law. It is the meaning

that the term would have to a person of ordinary skill in the art at the time of the invention. Id. at 1313. That person having ordinary skill in the art is deemed "to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Id. If the meaning of a term is not readily apparent, the court must then look to other intrinsic evidence to define the term. See id. at 1314.

A court must read claims "in view of the specification, of which they are a part." Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995). A court may also look beyond the patent and consult the prosecution history, if in evidence, during claim construction. Phillips, 415 F.3d at 1317. The patent and its prosecution history "usually provides the technological and temporal context to enable the court to ascertain the meaning of the claim to one of ordinary skill in the art at the time of the invention." V-Formation, Inc. v. Benetton Group SpA, 401 F.3d 1307, 1310 (Fed. Cir. 2005). In addition to intrinsic evidence, a court may also consider pertinent extrinsic evidence. Phillips, 415 F.3d at 1317.

The analysis for a means-plus-function claim term is governed by 35 U.S.C. § 112, ¶ 6:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

For a means-plus-function term, the analysis consists of two distinct steps. JVW Enters., Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1330 (Fed. Cir. 2005). First, the Court must identify the function associated with the claim language. Id. Second, then the Court must identify the corresponding structure in the written description that performs the function. Id. A "structure disclosed in the specification is [a] 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." B. Braun Medical, Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997). A proper construction should account for "all structures in the specification corresponding to the claimed function" and it would be error to limit the structure to be just the preferred embodiment. Callicrate v. Wadsworth Mfg., Inc., 427 F.3d 1361, 1369 (Fed. Cir.

2005). "The corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended." Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364, 1371 (Fed. Cir. 2001).

Means-plus-function terms are terms which are "purely functional limitations that do not provide the structure that performs the recited function" and should be construed as under 35 U.S.C. § 112, ¶ 6. Depuy Spine, Inc. v. Medtronic Sofamor Sanek, Inc., 469 F.3d 1005, 1023 (Fed. Cir. 2006). "Use of the term 'means' in a patent claim limitation creates a presumption that the statutory means-plus-function provision has been invoked, but that presumption may be rebutted if the properly construed claim limitation itself recites sufficiently definite structure to perform the claimed function." Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1361 (Fed. Cir. 2000).

The Court reviews each claim and considered each construction in light of the applicable standards of law. The Court construes the claim terms in dispute as indicated in the boxes in the charts below.

IT IS SO ORDERED.

DATED: August 15, 2011

MARILYN L. HUFF, District Judge
UNITED STATES DISTRICT COURT

Amended Claim Construction Chart – U.S. Patent No. 4,958,226
United States District Court, Southern District of California
Case No. 09-cv-0278-H (CAB)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
2. A circuit for encoding applied video signals that comprise successive frames, where each **frame** is divided into blocks, comprising:		*consistent with claims 2, 4, 6, and 12* **frame:** a complete set of digital representations for an image	*consistent with claims 2, 4, 6, and 12* **frame:** a complete picture from a video sequence		*consistent with claims 2, 4, 6, and 12* **frame:** a complete set of digital representations for an image
	consistent with claims 2-8, 11 and 12 **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** Plaintiff agrees with this construction. However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can carry electrical current	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current
	successive frames: one frame following another; consecutive frames	**successive frames:** one frame following another; consecutive frames However, plaintiff	**successive frames:** *MPT is collaterally estopped from relitigating this term.* one frame following another; consecutive	one frame following another; consecutive frames	**successive frames:** one frame following another; consecutive frames

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		disputes that it is collaterally estopped.	frames		
	consistent with claims 2, 5 and 12 **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame	*consistent with claims 2, 5 and 12* **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2, 5 and 12* **blocks:** *MPT is collaterally estopped from relitigating this term* sets of pixels (picture elements also called pels) that constitute a portion of a frame	sets of pixels (picture elements also called pels) that constitute a portion of a frame	*consistent with claims 2, 5 and 12* **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame
means for encoding the blocks of some of said frames by developing for each block of such frames (a) an approximated version of said block derived from an approximated version of said		Function: encoding the blocks of some of said frames by developing for each block of such frames (a) an approximated version of said block derived from an approximated version of said block developed for a previous frame, and	Function: encoding the blocks of some of said frames by developing for each block of such frames (a) an approximated version of said block derived from an approximated version of said block developed for a previous frame, and		Function: encoding the blocks of some of said frames by developing for each block of such frames (a) an approximated version of said block derived from an approximated version of said block developed for a previous frame, and

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block developed for a previous frame, and (b) a code which represents the deviation of said block from said approximated version of said block		(b) a code which represents the deviation of said block from said approximated version of said block Structure: shift circuit 15, subtractor 20, DCT 30, quantizer 40, inverse DCT 41, and adder 42 (as shown in Figure 1 and described in col. 1:56-58, col. 3:64-col. 4:32)	(b) a code which represents the deviation of said block from said approximated version of said block Structure: subtractor 20, DCT 30, quantizer 40, coder 50, inverse DCT 41, adder 42, frame memory 12, motion estimator 11, shift circuit 15 (as shown in Fig. 1 and as described at col. 3, line 64 - col. 4, line 32) including frame Fi+1 input to subtractor 20 and motion estimator 11, the prediction block of pels signal input to subtractor 20, the buffer feedback signal input to quantizer 40, the coded prediction		(b) a code which represents the deviation of said block from said approximated version of said block Structure: shift circuit 15, subtractor 20, DCT 30, quantizer 40, inverse DCT 41, and adder 42 (as shown in Figure 1 and described in col. 1:56-58, col. 3:64-col. 4:32) [*See MPT's CC brief, Doc. No. 414, at 32.*]

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			error output by coder 50, and including all inputs, outputs, and interconnections between these elements		
	consistent with claims 2 and 12 **deviations:** differences	*consistent with claims 2 and 12* **deviations:** differences However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2 and 12* **deviations:** *MPT is collaterally estopped from relitigating this term.* differences	differences	*consistent with claims 2 and 12* **deviations:** differences
second means for approximating the blocks of those of said frames that are to be interpolated by combining approximated versions of said blocks in selected ones of the frames		<u>Function:</u> approximating the blocks of those of said frames that are to be interpolated by combining approximated versions of said blocks in selected ones of the frames that are encoded in said means	<u>Function:</u> approximating the blocks of those of said frames that are to be interpolated by combining approximated versions of said blocks in selected ones of the frames that are encoded in said means		<u>Function:</u> approximating the blocks of those of said frames that are to be interpolated by combining approximated versions of said blocks in selected ones of the frames that are encoded in said means

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
that are encoded in said means for encoding		for encoding Structure: shift circuit 13, shift circuit 14, and averager 17 (as shown in Figure 1 and described at col. 4:35-49 and col. 5:35-47	for encoding Structure: frame memory 12, shift circuits 13 and 14, and averager 17 (as shown in Fig. 1 and as described at col. 3, lines 65-67 and col. 4, lines 35-50) including the coded version of frame Fi-1 output by frame memory 12, the motion vector signal and coded versions of frames Fi-1 and Fi+1 input to shift circuits 13 and 14, and the final prediction of frame Fi output by averager 17, and including all inputs, outputs, and interconnections between these elements		for encoding Structure: shift circuit 13, shift circuit 14, and averager 17 (as shown in Figure 1 and described at col. 4:35-49 and col. 5:35-47) [*See MPT's CC brief, Doc. No. 414, at 32.*]
third means		Function: developing	Function: developing		Function: developing

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
responsive to said second means and to said frames to be interpolated for developing code that corresponds to those pels in blocks approximated by said second means that differ from corresponding pels in said frames to be interpolated by greater than a preselected threshold		code that corresponds to those pels in blocks approximated by the second means that differ from corresponding pels in frames to be interpolated by greater than a preselected threshold Structure: subtractor 43, DCT 18, quantizer 19, and coder 44 (as shown in Figure 1 and described at col. 1:56-58, col 3:19-25, and col. 4:51-62)	code that corresponds to those pels in blocks approximated by said second means that differ from corresponding pels in said frames to be interpolated by greater than a preselected threshold Structure: frame memory 16, subtractor 43, DCT 18, quantizer 19, and coder 44 (as shown in Fig. 1 and as described at col. 4, lines 51-62) including the actual frame Fi input to and output by frame memory 16, the actual frame Fi and the predicted frame Fi input to subtractor 43, the buffer feedback signal input to quantizer 19, the		code that corresponds to those pels in blocks approximated by the second means that differ from corresponding pels in frames to be interpolated by greater than a preselected threshold Structure: subtractor 43, DCT 18, quantizer 19, and coder 44 (as shown in Figure 1 and described at col. 1:56-58, col 3:19-25, and col. 4:51-62) [*See MPT's CC brief, Doc. No. 414, at 32. Defendants improperly include frame memory 16.*]

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			coded interpolation error signal output by coder 44, and including all inputs, outputs, and interconnections between these elements		
	approximated: predicted	**approximated:** predicted	**approximated:** predicted		**approximated:** predicted
	preselected threshold: a value chosen in advance	**preselected threshold:** a value chosen in advance	**preselected threshold:** a value chosen in advance		**preselected threshold:** a value chosen in advance
3. The circuit of claim 2 wherein said code developed for a pel by said third means represents the difference between the value of said pel and the value of said pel approximated by said second means	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can carry electrical current	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current
	approximated:	**approximated:**	**approximated:**		**approximated:**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	predicted	predicted	predicted		predicted
4. The circuit of claim 2 wherein the frames selected for combining in said second means include a **frame** encoded in said first means that precedes the frame approximated in said second means and a frame encoded in said first means that succeeds the frame approximated in said means.	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** Plaintiff agrees with this construction. However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can carry electrical current	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current
	approximated: predicted	**approximated:** predicted	**approximated:** predicted		**approximated:** predicted
		consistent with claims 2, 4, 6, and 12 **frame:** a complete set of digital representations for an image	*consistent with claims 2, 4, 6, and 12* **frame:** a complete picture from a video sequence		*consistent with claims 2, 4, 6, and 12* **frame:** a complete set of digital representations for an image

Amended Claim Construction Chart – U.S. Patent No. 4,958,226
United States District Court, Southern District of California
Case No. 09-cv-0278-H (CAB)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
5. The circuit of claim 4 wherein said combining includes developing **anticipated versions** of said blocks		**anticipated versions:** The referenced language is not indefinite. The Court should construe the term as "estimated versions."	**anticipated versions:** (indefinite)		**anticipated versions:** estimated or expected versions
		anticipated: estimated	The proper term for construction, as construed in Defendants' preliminary constructions, is: "anticipated versions"		**anticipated:** estimated or expected
	consistent with claims 2-8, 11 and 12 **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current However, plaintiff disputes that it is	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can carry electrical current	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		collaterally estopped.			
	consistent with claims 2, 5 and 12 **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame	*consistent with claims 2, 5 and 12* **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2, 5 and 12* **blocks:** *MPT is collaterally estopped from relitigating this term.* sets of pixels (picture elements also called pels) that constitute a portion of a frame	sets of pixels (picture elements also called pels) that constitute a portion of a frame	*consistent with claims 2, 5 and 12* **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame
6. The circuit of claim 2 wherein a set proportion of **frames** of said applied video signals are interpolated.	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can carry electrical current	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current
		consistent with claims 2, 4, 6, and 12	*consistent with claims 2, 4, 6, and 12*		*consistent with claims 2, 4, 6, and 12*

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		frame: a complete set of digital representations for an image	**frame:** a complete picture from a video sequence		**frame:** a complete set of digital representations for an image
7. The circuit of claim 6 wherein said proportion is **approximately one half.**		This term should be given its plain meaning to one of skill in the art, and therefore does not require construction. If the Court determines that this term requires construction, the Court should construe the term as "nearly one-half."	almost exactly one-half		**approximately one half:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
	consistent with claims 2-8, 11 and 12 **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.*	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current

Amended Claim Construction Chart – U.S. Patent No. 4,958,226
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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
8. The circuit of claim 2 fruther [sic] comprising **buffer means** for **interposed between the codes developed by said means for encoding and said third means and an output port of said circuit**.		**buffer means**: This term does not require construction under 35 U.S.C. § 112(6). If the Court determines that this term is governed by 35 U.S.C. § 112(6), the Court should construe the term as follows: Function: To hold data (e.g., coded values or coded interpolation error) awaiting transmission. Structure: buffer 60 (as shown in Figure 1 and described in col. 4:16-18, 59-60)	**buffer means**: Function: buffering Structure: buffer 60 (as shown in Fig. 1 and as described at col. 4, lines 16-18 and col. 4, lines 59-62) including the quantized output coefficients and coded interpolation error input to and output from this element, and the feedback signals output by this element		**buffer means:** Function: buffering Structure: buffer 60 (as shown in Fig. 1 and as described at col. 4, lines 16-18 and col. 4, lines 59-62) including the quantized output coefficients and coded interpolation error input to and output from this element, and the feedback signals output by this element
		interposed between	**interposed between**		**interposed between**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		the codes developed by said means for encoding and said third means and an output port of said circuit: The referenced language is not indefinite. This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.	**the codes developed by said means for encoding and said third means and an output port of said circuit:** (indefinite)		**the codes developed by said means for encoding and said third means and an output port of said circuit:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
	consistent with claims 2-8, 11 and 12 **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current However, plaintiff	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			carry electrical current		
11. The circuit of claim 7 wherein granularity of the codes generated by said first means and said third means is controlled by the occupancy level of said buffer.	**granularity:** coarseness	**granularity:** coarseness	**granularity:** coarseness		**granularity:** coarseness
	consistent with claims 2-8, 11 and 12 **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current However, plaintiff disputes that it is collaterally estopped	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.* any path that can carry electrical current	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current
12. A circuit responsive to coded video signals where the video signals comprise successive frames and each **frame** includes a	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** *MPT is collaterally estopped from relitigating this term.*	any path that can carry electrical current	*consistent with claims 2-8, 11 and 12* **circuit:** any path that can carry electrical current

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plurality of blocks and where the coded video signals comprise codes that describe deviations from approximated blocks and codes that describe deviations from interpolated blocks, comprising;		However, plaintiff disputes that it is collaterally estopped	any path that can carry electrical current		
	coded: change from one form of representation to another	**coded:** change from one form of representation to another However, plaintiff disputes that it is collaterally estopped.	**coded:** *MPT is collaterally estopped from relitigating this term.* change from one form of representation to another	change from one form of representation to another	**coded:** change from one form of representation to another
	approximated blocks: predicted blocks	**approximated blocks:** predicted blocks However, plaintiff disputes that it is	**approximated blocks:** *MPT is collaterally estopped from relitigating this term.* predicted blocks	predicted blocks	**approximated blocks:** predicted blocks

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		collaterally estopped.			
	consistent with claims 2, 5 and 12 **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame	*consistent with claims 2, 5 and 12* **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2, 5 and 12* **blocks:** *MPT is collaterally estopped from relitigating this term.* sets of pixels (picture elements also called pels) that constitute a portion of a frame	sets of pixels (picture elements also called pels) that constitute a portion of a frame	*consistent with claims 2, 5 and 12* **blocks:** sets of pixels (picture elements also called pels) that constitute a portion of a frame
		consistent with claims 2, 4, 6, and 12 **frame:** a complete set of digital representations for an image	*consistent with claims 2, 4, 6, and 12* **frame:** a complete picture from a video sequence		*consistent with claims 2, 4, 6, and 12* **frame:** a complete set of digital representations for an image
	consistent with claims 2 and 12 **deviations:**	*consistent with claims 2 and 12* **deviations:**	*consistent with claims 2 and 12* **deviations:** *MPT is collaterally*	differences	*consistent with claims 2 and 12* **deviations:**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	differences	differences However, plaintiff disputes that it is collaterally estopped.	*estopped from relitigating this term.* differences		differences
means for developing block approximations from said codes that describe deviations from approximated blocks; and		Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. Function: developing block approximations from said codes that describe deviations from approximated blocks Structure: decoder 22, inverse DCT 24, adder 27, and shift circuit 26 (as shown in Fig. 2 and as described at col. 1:56-58, col. 4:3-10, 26-32, col. 4:63-col. 5:7)	*MPT is collaterally estopped from relitigating this term.* Function: developing block approximations from said codes that describe deviations from approximated blocks Structure: decoder 22, DCT^{-1} 24, adder 27, and shift circuit 26, including all inputs and outputs of these elements related to the claimed function (See Fig. 2; Col. 4, lines 3-10, 26-32, Col. 4, line 63 to Col. 5, line 7).	Function: The function is developing block approximations [the combinations of predicted blocks with differences between the actual blocks and the predicted blocks] from said codes that describe deviations from approximated blocks. Corresponding Structure: Decoder 22, DCT^{-1} 24, Adder 27, and Shift Circuit 26, including all inputs and outputs of these	Function: The function is developing block approximations [the combinations of predicted blocks with differences between the actual blocks and the predicted blocks] from said codes that describe deviations from approximated blocks. Corresponding Structure: Decoder 22, DCT^{-1} 24, Adder 27, and Shift Circuit 26, including all inputs and outputs of these

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				elements related to the claimed function (*See* Fig. 2; Col. 4, lines 3-10, 26-32, Col. 4, line 63 to Col. 5, line 7).	elements related to the claimed function (*See* Fig. 2; Col. 4, lines 3-10, 26-32, Col. 4, line 63 to Col. 5, line 7).
	consistent with claims 2 and 12 **deviations:** differences	*consistent with claims 2 and 12* **deviations:** differences However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2 and 12* **deviations:** *MPT is collaterally estopped from relitigating this term.* differences	differences	*consistent with claims 2 and 12* **deviations:** differences
	block approximations: the combinations of predicted blocks with differences between the actual blocks and the predicted blocks	**block approximations:** the combinations of predicted blocks with differences between the actual blocks and the predicted blocks However, plaintiff	**block approximations:** *MPT is collaterally estopped from relitigating this term.* the combinations of predicted blocks with differences between the actual blocks and the predicted blocks	the combinations of predicted blocks with differences between the actual blocks and the predicted blocks	**block approximations:** the combinations of predicted blocks with differences between the actual blocks and the predicted blocks

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		disputes that it is collaterally estopped.			
	approximated blocks: predicted blocks	**approximated blocks:** predicted blocks However, plaintiff disputes that it is collaterally estopped.	**approximated blocks:** *MPT is collaterally estopped from relitigating this term.* predicted blocks	predicted blocks	**approximated blocks:** predicted blocks
means responsive to said block approximations and to said codes that describe deviations from interpolated blocks to develop said interpolated blocks		Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. <u>Function:</u> develop said interpolated blocks <u>Structure:</u> decoder 25, inverse DCT 34, adder 35, shift circuits 31 and 39, and averager 32 (as shown in Fig. 2 and as	*MPT is collaterally estopped from relitigating this term* <u>Function</u>: to develop said interpolated blocks responsive to said block approximations and to said codes that describe deviations from interpolated blocks. <u>Structure</u>: decoder 25, DCT^{-1} 34, adder 35, and shift circuits 31	<u>Function:</u> The function is to develop said interpolated blocks responsive to said block approximations [the combinations of predicted blocks with differences between the actual blocks and the predicted blocks] and to said codes that describe deviations from interpolated blocks.	<u>Function:</u> The function is to develop said interpolated blocks responsive to said block approximations [the combinations of predicted blocks with differences between the actual blocks and the predicted blocks] and to said codes that describe deviations from interpolated blocks.

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		described at col. 1:56-58, col. 4:63-65, col. 5:7-23, 5:35-47)	and 39, and averager 32, including all inputs and outputs of these elements related to the claimed function (See Fig. 2; Col. 4, lines 63-65 ; Col. 5, lines 7-23 [description of the structure and inputs that correspond to these elements is at Col. 4, lines 38-50])	Structure: Decoder 25, DCT^{-1} 34, Adder 35, and Shift Circuits 31 and 39, and Averager 32, including all inputs and outputs of these elements related to the claimed function (See Fig. 2; Col. 4, lines 63-65; Col. 5, lines 7-23 [description of the structure and inputs that correspond to these elements is at Col. 4, lines 38-50]).	Structure: Decoder 25, DCT^{-1} 34, Adder 35, and Shift Circuits 31 and 39, and Averager 32, including all inputs and outputs of these elements related to the claimed function (See Fig. 2; Col. 4, lines 63-65; Col. 5, lines 7-23 [description of the structure and inputs that correspond to these elements is at Col. 4, lines 38-50]).
	block approximations: the combinations of predicted blocks with differences between the actual blocks and the predicted blocks	**block approximations:** the combinations of predicted blocks with differences between the actual blocks and the predicted blocks However, plaintiff disputes that it is	**block approximations:** *MPT is collaterally estopped from relitigating this term* the combinations of predicted blocks with differences between the actual blocks and	the combinations of predicted blocks with differences between the actual blocks and the predicted blocks	**block approximations:** the combinations of predicted blocks with differences between the actual blocks and the predicted blocks

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		collaterally estopped.	the predicted blocks		
	consistent with claims 2 and 12 **deviations:** differences	*consistent with claims 2 and 12* **deviations:** differences However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 2 and 12* **deviations:** *MPT is collaterally estopped from relitigating this term* differences	differences	*consistent with claims 2 and 12* **deviations:** differences

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
1. An encoder including a **coder** for developing encoder output signals from **frame** difference signals,		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image	*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete picture from a video sequence		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image
		consistent with claims 1, 8 and 29 **coder:** hardware, which may include one or more circuits or processors programmed with appropriate software, that changes a video signal from one form of representation to another	*consistent with claims 1, 8 and 29* **coder:** hardware, which may include a general-purpose processor programmed with appropriate software, that changes a video signal from one form of representation to another	hardware, which may include a general-purpose processor programmed with appropriate software, that changes a video signal from one form of representation to another	*consistent with claims 1, 8 and 29* **coder:** hardware, which may include a general-purpose processor programmed with appropriate software, that changes a video signal from one form of representation to another
prediction means responsive to said encoder output signals for predicting a next		Function: predicting a next frame's signals Structure: inverse	This limitation must be construed under 35 U.S.C. § 112(6). Function:	Function: predicting a next frame's signals Structure: As shown in Figure 2	Function: predicting a next frame's signals Structure: As shown in Figure 2

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
frame's signals, and		quantizer 39; inverse DCT 40; adder 41; and motion compensator 43 (as shown in Figure 2 and as described at col. 6:9-31, 40-46)	predicting a next frame's signals in response to the encoder output signals <u>Structure:</u> motion vector generator 13 (as shown in Fig. 1 and its internal circuitry shown in Figs. 3-4, and described at cols. 4:35-47, 5:15-27, and 7:33-10:49), including the applied next frames I(t) and I(t-1) input to this element and motion vectors MV(t-1) output by this element; motion vector selector/encoder 14 (as shown in Fig. 1 and its internal circuitry shown in Fig. 6, and described at cols. 4:43-51, 5:23-39, and 10:50-12:18),	and as described in those portions of 5:60-7:20 describing these elements: adders 41 and 54; subtracter 44; multiplier 45; motion compensator 43; inverse quantizer 39; inverse DCT 40; and including all inputs, outputs, and interconnections of these elements necessary to the claimed function.	and as described in those portions of 5:60-7:20 describing these elements: adders 41 and 54; subtracter 44; multiplier 45; motion compensator 43; inverse quantizer 39; inverse DCT 40; and including all inputs, outputs, and interconnections of these elements necessary to the claimed function.

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			including the motion vector MV(t-1) input to this element and motion vectors MV(t-2) output by this element; adder 41 (as shown in Fig. 2 and described at col. 6:19-22), including all inputs and outputs; adder 54 (as shown in Fig. 2 and described at col. 6:19-24), including all inputs and outputs; subtractor 44 (as shown in Fig. 2 and described at cols. 5:65-6:3, 6:31-37, and 6:41-44), including all inputs and outputs; multiplier 45 (as shown in Fig. 2 and described at cols.		

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			5:65-6:3 and 6:35-39), including leak factor L(t-4) and displaced frame signal DF with the mean removed input to this element and the best estimation of image I(t-4) output by this element; motion compensator 43 (as shown in Fig. 2 and described at cols. 5:32-37, 6:28-33, 6:40-41, and 12:20-32), including the motion vectors MV(t-4) and previous frame input to this element and the estimate of the image signal I(t-4) output by this element; inverse quantizer 39 (as shown in Fig. 2 and its internal circuitry in Fig. 11		

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			and described at cols. 6:9-18 and 18:36-68), including scale factors Sji and quantized superblock vector signals input to this element and inversely quantized frequency coefficients output by this element; and inverse DCT 40 (as shown in Fig. 2 and described at cols. 6:9-14), including the inversely quantized frequency coefficients input to this element and approximated frame difference signals output by this element		
means for developing said frame difference signals from applied next frame signals of an image frame and from output signals	Function: developing the frame difference signals mentioned earlier in the claim from applied next frame signals of an image	Function: developing the frame difference signals mentioned earlier in the claim from applied next frame signals of an image	This limitation must be construed under 35 U.S.C. § 112(6). Function: developing the frame difference signals	Function: developing the frame difference signals mentioned earlier in the claim from applied next frame signals of an image frame and from	Function: developing the frame difference signals mentioned earlier in the claim from applied next frame signals of an image

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
of said prediction means, the improvement comprising:	frame and from output signals of said prediction means	frame and from output signals of said prediction means Structure: subtracter 36 (as shown in Figure 2 and described at col. 5:63-6:4, 6:40-46)	mentioned earlier in the claim from applied next frame signals of an image frame and from output signals of said prediction means. Structure: subtractor 35 (as shown in Fig. 2 and described at cols. 5:63-6:3), including the image signal I(t-4) input to this element and the frame-mean signal M(t-4) input to this element and the mean excluded image signal I(t-4) output by this element; and subtractor 36 (as shown in Fig. 2 and described at cols. 5:63-6:3), including the mean excluded image signal I(t-4) input to this element	output signals of said prediction means. Structure: As shown in Figure 2 and described at 5:63-6:3: subtracters 35 and 36, and all inputs, outputs, and interconnections of these elements necessary to the claimed function	frame and from output signals of said prediction means Structure: As shown in Figure 2 and described at 5:63-6:3: subtracters 35 and 36, and all inputs, outputs, and interconnections of these elements necessary to the claimed function

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			and best estimation of image I(t-4) input to this element and the frame difference signals output by this element		
said coder including **controllable quantizer means that quantizes said difference signals in accordance with a quantization schema that varies with the dictates of a control signal**; and	Function: quantizing the difference signals mentioned earlier in the claim in accordance with a quantization schema that varies with the dictates of a control signal	Function: quantizing the difference signals mentioned earlier in the claim in accordance with a quantization schema that varies with the dictates of a control signal Structure: (1) Quantizer vector selector 38 (as shown in Figure 2, and described at col. 5:60-6:12 (the other elements cited in this passage are not part of the corresponding structure for this element) and/or col.	This limitation must be construed under 35 U.S.C. § 112(6). Function: quantizing the difference signals mentioned earlier in the claim in accordance with a quantization schema that varies with the dictates of a control signal Structure: DCT 37 (as shown in Fig. 2, and as described at cols. 6:3-6, 14:27-36, and 14:66-67), including the frame difference signals input to this	Function: quantizing the difference signals mentioned earlier in the claim in accordance with a quantization schema that varies with the dictates of a control signal Structure: Quantizer vector selector 38 ("QVS"). The QVS is shown in context in Figure 2, and its general role is described at 5:60-6:12. (The other elements cited in this passage are not part of the corresponding structure for this	Function: quantizing the difference signals mentioned earlier in the claim in accordance with a quantization schema that varies with the dictates of a control signal Structure: Quantizer vector selector 38 ("QVS"). The QVS is shown in context in Figure 2, and its general role is described at 5:60-6:12. (The other elements cited in this passage are not part of the corresponding

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		14:67-col. 15:13); (2) Quantization encoder 81 and subtracter 84 (as shown in Figure 9 and as described at col. 15:61-16:5, and col. 16:12-22); or (3) Figure 10 (as described at col. 16:39-18:16) (The variable length encoders 46 and 47 discussed in this passage are not part of the corresponding structure for this element.).	element and frequency domain coefficients output by this element; and quantizer vector selector 38 ("QVS") (as shown in Fig. 2, and its general role is described at cols. 5:60-6:12 and its internal circuitry as shown in Figs. 9 and 10, and described at cols. 15:57-18:16), including the frequency coefficient signals input to this element and the quantized superblock vector signals output by this element	element.) The internal circuitry of the QVS is shown in Figures 9 and 10, and described at 15:57-17:34. The elements shown in Figures 9 and 10 are part of the overall corresponding structure for this element. Certain components in the QVS are described further at 17:34-18:16. (The variable length encoders 46 and 47 discussed in this passage are not part of the corresponding structure for this element.)	structure for this element.) The internal circuitry of the QVS is shown in Figures 9 and 10, and described at 15:57-17:34. The elements shown in Figures 9 and 10 are part of the overall corresponding structure for this element. Certain components in the QVS are described further at 17:34-18:16. (The variable length encoders 46 and 47 discussed in this passage are not part of the corresponding structure for this element.)
		quantization schema:	**quantization schema:**	a way of quantizing	**quantization schema:**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		a way of quantizing	a structured framework for quantizing		a way of quantizing
said coder including means, responsive to said applied next frame signals, to develop said control signal, which control signal varies throughout said applied next frame with changes in at least one selected characteristic of said applied next frame signals.		**said coder including means, responsive to develop said control signal, which control signal varies throughout said applied next frame with changes in at least one selected characteristic of said applied next frame signals.:** Function: developing the control signal, which varies throughout the applied next frame with changes in at least one selected characteristic of the applied next frame signals	**means, responsive to said applied next frame signals, to develop said control signal, which control signal varies throughout said applied next frame with changes in at least one selected characteristic of said applied next frame signals:** This limitation must be construed under 35 U.S.C. § 112(6). Function: developing the control signal mentioned earlier in the claim, which varies throughout the applied next frame with changes in at least one	Function: developing the control signal, which varies throughout the applied next frame with changes in at least one selected characteristic of the applied next frame signals Structure: perceptual coder 49 (as shown in Figure 2) including at least one of the following sets of internal circuitry: (1) generator 93 (as shown in Figure 12), where generator 93 includes at least texture processors 96 and 98, combiner 99, and mapping look up table 100 (as shown in	Function: developing the control signal, which varies throughout the applied next frame with changes in at least one selected characteristic of the applied next frame signals Structure: perceptual coder 49 (as shown in Figure 2) including at least one of the following sets of internal circuitry: (1) generator 93 (as shown in Figure 12), where generator 93 includes at least texture processors 96 and 98, combiner 99, and mapping look up table 100 (as shown in

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		Structure: perceptual coder 49 (as shown in Figure 2) including at least one of the following sets of internal circuitry: (1) generator 93 (as shown in Figure 12), where generator 93 includes at least texture processors 96 and 98, combiner 99, and mapping look up table 100 (as shown in Figure 13, and described at 20:32-21:12, 21:42-43, 21:53-22:5), and where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107 or 108 (as shown in Figure 14 and described at 21:43-	selected characteristic of the applied next frame signals in response to said applied next frame signals Structure: perceptual coder 49 (as shown in Fig. 2) including at least one of the following sets of internal circuitry: (1) perceptual processor 93 (as shown in Fig. 12), where perceptual processor 93 includes at least texture processors 96 and 98, combiner 99, and mapping look up table 100 and base threshold look-up table 111 (as shown in Fig. 13, and described at cols. 20:32-21:12, 21:41-42, 21:53-22:5	Figure 13, and described at 20:32-21:12, 21:42-43, 21:53-22:5), and where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 1 08 (as shown in Figure 14 and described at 21:43-49); (2) generator 93 (as shown in Figure 12), where generator 93 includes at least: adder 101, brightness correction truncation circuit 97, and brightness correction look-up table 110 (as shown in Figure 13, and described at 21:27-34, 22:6-10); or	Figure 13, and described at 20:32-21:12, 21:42-43, 21:53-22:5), and where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 1 08 (as shown in Figure 14 and described at 21:43-49); (2) generator 93 (as shown in Figure 12), where generator 93 includes at least: adder 101, brightness correction truncation circuit 97, and brightness correction look-up table 110 (as shown in Figure 13, and described at 21:27-34, 22:6-10); or

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		49); (2) generator 93 (as shown in Figure 12), where generator 93 includes at least: adder 101, brightness correction truncation circuitry 97, and brightness correction look-up table 110 (as shown in Figure 13 and described at 21:27-34, 22:6-10); or (3) rate processor 91 (as shown in Figure 12 and described at 22:36-23:40).	and 22:12-22), and where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 108 (as shown in Fig. 14 and described at cols. 21:43-49), including their interconnects, the transformed image information with the mean removed $\dot{I}_T(t-4)$ and temporal frame difference of the transformed image information with the mean removed $\dot{I}_T(t-4)$ input into this element and the perceptual thresholds PTij(t-4) output by this element; or (2) perceptual processor 93 (as shown in Fig. 12),	(3) rate processor 91 (as shown in Figure 12 and described at 22:36-23:40)	(3) rate processor 91 (as shown in Figure 12 and described at 22:36-23:40)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			where perceptual processor 93 includes at least: adder 101, brightness correction truncation circuit 97, and brightness correction look-up table 110 and base threshold look-up table 111 (as shown in Fig. 13, and described at cols. 21:24-34, 22:6-22) including their interconnects, the transformed image information with the mean removed $\dot{I}_T(t-4)$ and mean signal M(t-4) input into this element and the perceptual thresholds PTij(t-4) output by this element		
		consistent with claims 1, 4 and 9 **selected characteristic :**	*consistent with claims 1, 4 and 9* **selected characteristic:**	Any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture,	*consistent with claims 1, 4 and 9* **selected characteristic:**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		any characteristic of the applied next frame signals, including, but not limited to, a measure of texture, a measure of brightness, a measure of buffer fullness, temporal differences, frequency sensitivity, or distortion	any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture, or (2) a measure of brightness	(2) a measure of brightness, or (3) a measure of buffer fullness.	Any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture, (2) a measure of brightness, or (3) a measure of buffer fullness.
"means, responsive to said applied next frame signals, to develop said control signal, which control signal varies throughout said applied next frame with changes in at least one selected characteristic of said applied next frame signals" . . . 4. "The encoder of		This limitation does not require construction under 35 U.S.C. § 112 (6). The "means … responsive to said applied next frame" limitation is already recited in claim 1. Claim 4 only adds the "wherein said selected characteristic is a measure of texture in applied next frame signals" limitation.	This limitation must be construed under 35 U.S.C. § 112(6). Function: developing the control signal, which varies throughout the applied next frame at least with changes to a measure of texture in the applied next frame signals Structure: perceptual coder 49 (as shown in Fig. 2) including at	Function: developing the control signal, which varies throughout the applied next frame at least with changes to a measure of texture in the applied next frame signals Structure: perceptual coder 49 (as shown in Figure 2) including at least a generator 93 (as shown in Figure 12), where generator 93 includes at least	Function: developing the control signal, which varies throughout the applied next frame at least with changes to a measure of texture in the applied next frame signals Structure: perceptual coder 49 (as shown in Figure 2) including at least a generator 93 (as shown in Figure 12), where generator 93 includes at least

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
claim 1 **wherein said selected characteristic is a measure of texture in said applied next frame signals"**			least perceptual processor 93 (as shown in Fig. 12), where perceptual processor 93 includes at least texture processors 96 and 98, combiner 99, and mapping look up table 100 and base threshold look-up table 111 (as shown in Fig. 13, and described at cols. 20:32-21:12, 21:41-42, 21:53-22:5, and 22:12-22), and where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 108 (as shown in Fig. 14 and described at 21:43-49), including their interconnects, the transformed image information with the	the following internal circuitry: texture processors 96 and 98, combiner 99, and mapping look up table 100 (as shown in Figure 13, and described at 20:32-21:12, 21:42-43, 21:53-22:5:), where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 108 (as shown in Figure 14 and described at 21:43-49)	the following internal circuitry: texture processors 96 and 98, combiner 99, and mapping look up table 100 (as shown in Figure 13, and described at 20:32-21:12, 21:42-43, 21:53-22:5:), where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 108 (as shown in Figure 14 and described at 21:43-49)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			mean removed $\dot{I}_T(t-4)$ and temporal frame difference of the transformed image information with the mean removed $\dot{I}_T(t-4)$ input into this element and the perceptual thresholds PTij(t-4) output by this element		
		consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete picture from a video sequence		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image
		consistent with claims 1, 4 and 9 **selected characteristic :** any characteristic of the applied next frame signals, including, but not	*consistent with claims 1, 4 and 9* **selected characteristic:** any of the following characteristics of the applied next frame signals, alone or in	Any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture, (2) a measure of brightness, or (3) a measure of buffer fullness.	*consistent with claims 1, 4 and 9* **selected characteristic :** Any of the following characteristics of the applied next frame signals, alone or in

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		limited to, a measure of texture, a measure of brightness, a measure of buffer fullness, temporal differences, frequency sensitivity, or distortion	combination: (1) a measure of texture, or (2) a measure of brightness		combination: (1) a measure of texture, (2) a measure of brightness, or (3) a measure of buffer fullness.
"means, responsive to said applied next frame signals, to develop said control signal, which control signal varies throughout said applied next frame with changes in at least one selected characteristic of said applied next frame signals" . . . 6. The encoder of claim 4 **wherein said measure of texture is a combination of a texture measure of**		This limitation does not require construction under 35 U.S.C. § 112 (6). The "means … responsive to said applied next frame" limitation is already recited in claim 1. Claim 6 only adds the "wherein said measure of texture is a combination of a texture measure of said applied next frame signals and of previously applied next frame signals" limitation.	This limitation must be construed under 35 U.S.C. § 112(6). Function: developing the control signal, which varies throughout the applied next frame at least with changes to a measure of texture in the applied next frame signals Structure: perceptual coder 49 (as shown in Fig. 2) including at least perceptual processor 93 (as shown in Fig. 12), where perceptual		Function: developing the control signal, which varies throughout the applied next frame at least with changes to a measure of texture in the applied next frame signals, wherein said measure of texture is a combination of a texture measure of said applied next frame signals and of previously applied next frame signals. Structure: perceptual coder 49 (as shown in Figure 2)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
said applied next frame signals and of previously applied next frame signals.			processor 93 includes at least texture processors 96 and 98, combiner 99, and mapping look up tables 100 and base threshold look-up table 111 (as shown in Fig. 13, and described at cols. 20:32-21:12, 21:41-42-43, 21:53-22:5, and 22:12-22), and where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 108 (as shown in Fig. 14 and described at 21:43-49), including their interconnects, the transformed image information with the mean removed $\dot{I}_T(t-4)$ and temporal frame difference of the transformed image		including at least a generator 93 (as shown in Figure 12), where generator 93 includes at least the following internal circuitry: texture processors 96 and 98, combiner 99, and mapping look up table 100 (as shown in Figure 13, and described at 20:32-21:12, 21:42-43, 21:53-22:5:), where texture processors 96 and 98 each include at least look-up table 114 and one of the accumulators 106, 107, or 108 (as shown in Figure 14 and described at 21:43-49)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			information with the mean removed $\dot{I}_T(t-4)$ input into this element and the perceptual thresholds PTij(t-4) output by this element		
		consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete picture from a video sequence		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image
8. The encoder of claim 1 further comprising an output buffer for receiving said encoder output signals, and said **coder** comprising		*consistent with claims 1, 8 and 29* **coder:** hardware, which may include one or more circuits or processors programmed with appropriate software, that changes a video signal from one form of representation to another	*consistent with claims 1, 8 and 29* **coder:** hardware, which may include a general-purpose processor programmed with appropriate software, that changes a video signal from one form of representation to another	hardware, which may include a general-purpose processor programmed with appropriate software, that changes a video signal from one form of representation to another	*consistent with claims 1, 8 and 29* **coder:** hardware, which may include a general-purpose processor programmed with appropriate software, that changes a video signal from one form of representation to another

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
means for receiving signals from said output buffer that indicate the level of buffer fullness of said output buffer.		Function: receiving signals from said output buffer Structure: perceptual coder 49, and its interconnection to BFF block 56 (as shown in Figure 2)	This limitation must be construed under 35 U.S.C. § 112(6). Function: receiving signals from said output buffer that indicate the level of buffer fullness of said output buffer Structure: perceptual coder 49 (including internal circuitry rate processor 91 (as shown in Fig. 12 and described at cols. 22:36- 23:45) including buffer fullness input to this element and distortion level D output by this element; and multiplier 92 (as shown in Fig. 12 and described at cols. 19:56-63 and 23:41-	Function: receiving signals from said output buffer that indicate the level of buffer fullness of said output buffer Structure: perceptual coder 49, and its interconnection to BFF block 56, as shown in Figure 2	Function: receiving signals from said output buffer that indicate the level of buffer fullness of said output buffer Structure: perceptual coder 49, and its interconnection to BFF block 56, as shown in Figure 2

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			43) including distortion level D and perceptual thresholds PTij(t-4) input to this element and target distortion levels output by this element		
9. The encoder of claim 8 wherein **selected characteristic** is **a measure of buffer fullness of said output buffer.**		The referenced language is not indefinite. This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.	This language cannot be construed because it is invalid due to indefiniteness and failure to satisfy 35 U.S.C. §§ 112(4) and (6).		The referenced language is not indefinite. This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
		consistent with claims 1, 4 and 9 **selected characteristic:** any characteristic of the applied next frame signals, including, but not limited to, a measure of texture, a measure	*consistent with claims 1, 4 and 9* **selected characteristic:** any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture, or	Any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture, (2) a measure of brightness, or (3) a measure of buffer fullness.	*consistent with claims 1, 4 and 9* **selected characteristic:** Any of the following characteristics of the applied next frame signals, alone or in combination: (1) a measure of texture,

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		of brightness, a measure of buffer fullness, temporal differences, frequency sensitivity, or distortion	(2) a measure of brightness		(2) a measure of brightness, or (3) a measure of buffer fullness.
17. The encoder of claim 1 wherein said next **frame** signals comprise a sequence of signal sections, each of which is related to a transform of at least one block of said frame difference signals, and each of which including a collection of N transform element signals, and said control signal comprising N control signal cells, where N in a constant, and each control signal cell controls the quantization schema for a different one of said N transform		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image	*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete picture from a video sequence		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
element signals					
	transform element signals: frequency domain coefficients	**transform element signals:** frequency domain coefficients	**transform element signals:** frequency domain coefficients		**transform element signals:** frequency domain coefficients
26. An encoder comprising: **prediction means responsive to output signals of said encoder, for developing frame prediction signals**		Function: developing frame prediction signals Structure: inverse quantizer 39; inverse DCT 40; adder 41; and motion compensator 43 (as shown in Figure 2 and as described at col. 6:9-31, 40-46)	This limitation must be construed under 35 U.S.C. § 112(6). Function: developing frame prediction signals in response to output signals of the encoder Structure: motion vector generator 13 (as shown in Fig. 1 and its internal circuitry shown in Figs. 3-4, and described at cols. 4:35-47, 5:15-27, and col. 7:33-10:49), including the applied next frames I(t) and I(t-1) input to this		Function: developing frame prediction signals in response to output signals of the encoder Structure: inverse quantizer 39; inverse DCT 40; adder 41; and motion compensator 43 (as shown in Figure 2 and as described at col. 6:9-31, 40-46) [The Court requests the parties to discuss the motion vector generator 13 and motion vector selector/encoder 14 at the hearing.]

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			element and motion vectors MV(t-1) output by this element; motion vector selector/encoder 14 (as shown in Fig. 1 and its internal circuitry shown in Fig. 6, and described at cols. 4:43-51, 5:23-39, and 10:50-12:18), including the motion vector MV(t-1) input to this element and motion vectors MV(t-2) output by this element; adder 41 (as shown in Fig. 2 and described at col. 6:19-22), including all inputs and outputs; adder 54 (as shown in Fig. 2 and described		

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			at col. 6:19-24), including all inputs and outputs; subtractor 44 (as shown in Fig. 2 and described at cols. 5:65-6:3, 6:3531-37, and 6:41-44), including all inputs and outputs; multiplier 45 (as shown in Fig. 2 and described at cols. 5:65-6:3 and 6:35-39), including leak factor L(t-4) and displaced frame signal DF with the mean removed input to this element and the best estimation of image I(t-4) outputs by this element; motion compensator 43 (as shown in Fig. 2 and described at cols.		

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			5:32-37, 6:28-33, 6:40-41, and 12:20-32), including the motion vectors MV(t-4) and previous frame input to this element and all inputs and the estimate of the image signal I(t-4) output by this element outputs; inverse quantizer 39 (as shown in Fig. 2 and its internal circuitry in Fig. 11 and described at cols. described at cols. 6:9-18 and 18:36-68), including scale factors Sji and quantized superblock vector signals input to this element and inversely quantized frequency coefficients output by this element; and inverse DCT 40 (as shown in Fig. 2 and		

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			described at cols. 6:9-14), including the inversely quantized frequency coefficients input to this element and approximated frame difference signals output by this element		
		consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete picture from a video sequence		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of digital representations for an image
means for developing frame difference signals in response to said frame prediction means and applied frame signals		Function: developing frame difference signals Structure: subtracter 36 (as shown in Figure 2 and described at col 5:63-6:4, 40-46)	This limitation must be construed under 35 U.S.C. § 112(6). Function: developing frame difference signals in response to the frame prediction means and applied frame signals		Function: developing frame difference signals Structure: subtracter 36 (as shown in Figure 2 and described at col 5:63-6:4, 40-46) [The Court requests

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			Structure: subtractor 35 (as shown in Fig. 2 and described at cols. 5:63-6:3), including the input to this element image signal I(t-4) input to this element and the frame mean signal M(t-4) input to this element and the mean excluded image signal I(t-4) output by this element; and subtractor 36 (as shown in Fig. 2 and described at cols. 5:63-6:3), including the mean excluded image signal I(t-4) input to this element and best estimation of image I(t-4) input to this element and the frame difference signals output by this element		the parties to discuss the subtractor 35 at the hearing.]

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
coder means, responsive to said frame difference signals and to a control signal, for encoding frame difference signals under direction of said control signal, where said coder means codes different portions of said frame difference signals with different coding schemas, where different coding schemas yield different numbers of bits when coding any given signal, said coder means thereby generates a number of bits when encoding said applied frame signals; and	Function: encoding the frame difference signals under direction of the control signal mentioned earlier in the claim	Function: encoding frame difference signals under direction of said control signal Structure: (a) (1) Quantizer vector selector 38 (as shown in Figure 2 and described at col. 6:6-9 (the other elements cited in this passage are not part of the corresponding structure for this element), col. 6:63-64, col. 7:12-15 and col. 14:67-col. 15:18), or (2) Quantization encoder 81 and subtracter 84 (as shown in Figure 9 and as described at col. 15:61-16:3, col. 16:12-22 and col 16:23-32), or (3) Figure 10 (as	This limitation must be construed under 35 U.S.C. § 112(6). Function: encoding the frame difference signals under direction of the control signal mentioned earlier in the claim Structure: DCT 37 (as shown in Fig. 2, and as described at cols. 6:3-6, 14:27-36, and 14:66-67), including the frame difference signals input to this element and frequency domain coefficients output by this element; quantizer vector selector 38 ("QVS") (as shown in Fig. 2, and its general role is		Function: encoding the frame difference signals under direction of the control signal mentioned earlier in the claim Structure: (a) (1) Quantizer vector selector 38 (as shown in Figure 2 and described at col. 6:6-9 (the other elements cited in this passage are not part of the corresponding structure for this element), col. 6:63-64, col. 7:12-15 and col. 14:67-col. 15:18), or (2) Quantization encoder 81 and subtracter 84 (as shown in Figure 9 and as described at col. 15:61-16:3, col. 16:12-22 and col

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		described at col. 16:39-18:16) (The variable length encoders 46 and 47 discussed in this passage are not part of the corresponding structure for this element.); and (b) at least one of variable length encoders 46 and 47 (as shown in FIG. 2 and described at col. 17:41-46, 18:20-33).	described at cols. 5:60-6:12 and its internal circuitry as shown in Figs. 9 and 10, and described at cols. 15:57-18:16), including the frequency coefficient signals input to this element and the quantized superblock vector signals output by this element; and variable length encoder 46 and 47 (as shown in Fig. 2 and described at cols. 17:46-18:33), including the quantized superblock vector signals input to this element and codebook vectors and quantized superblock vectors output by this element		16:23-32), or (3) Figure 10 (as described at col. 16:39-18:16) (The variable length encoders 46 and 47 discussed in this passage are not part of the corresponding structure for this element.); and (b) variable length encoder 46 and 47 (as shown in Fig. 2 and described at cols. 17:46-18:33), including the quantized superblock vector signals input to this element and codebook vectors and quantized superblock vectors output by this element [The Court requests the parties to discuss why "at least one" in

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
					Plaintiff's proposed construction at the hearing.]
control means for developing said control signal in response to said encoder output signals, to control the number of bits generated by said coder means while encoding said applied frame signals		Function: developing said control signal Structure: perceptual coder 49 (as shown in Figure 2), including rate processor 91 (as shown in Figure 12 and described at 22:36-23:40)	This limitation must be construed under 35 U.S.C. § 112(6). Function: developing said control signal in response to said encoder output signals to control the number of bits generated by said coder means while encoding the applied frame signals Structure: buffer fullness and formatter 56 (as shown in Fig. 2 and described at cols. 23:47-24:52) including inputs codebook vectors and quantized superblock vectors as inputs and buffer fullness output		Function: developing said control signal in response to said encoder output signals to control the number of bits generated by said coder means while encoding the applied frame signals Structure: perceptual coder 49 (as shown in Figure 2), including rate processor 91 (as shown in Figure 12 and described at 22:36-23:40) [The Court requests the parties to discuss the buffer fullness and formatter 56 at the hearing.]

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			by this element; and perceptual coder 49 (as shown in Fig. 2 including internal circuitry rate processor 91 (as shown in Fig. 12 and described at cols. 22:36-23:45) including buffer fullness input to this element and distortion level D output by this element		
"control means for developing said control signal in response to said encoder output signals, to control the number of bits generated by said coder means while encoding said applied frame signals" . . .		This limitation does not require construction under 35 U.S.C. § 112 (6). The "control means for developing said control signal…" limitation is already recited in claim 26. Claim 29 only adds the "where said control means is further responsive to said applied frame	This limitation must be construed under 35 U.S.C. § 112(6). <u>Function:</u> developing said control signal in response to said encoder output signals to control the number of bits generated by said coder means while encoding the applied frame signals;		<u>Function:</u> developing said control signal in response to said encoder output signals to control the number of bits generated by said coder means while encoding the applied frame signals; and in response to said applied frame signals modifying the developed control

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29. "**where said control means is further responsive to said applied frame signals and modifies its developed control signal based on said applied frame signals to control coding error signals created in said coder in the course of coding of said frame difference signals**"		signals …" limitation.	and in response to said applied frame signals modifying the developed control signal based on said applied frame signals to control coding error signals created in said coder in the course of coding of said frame difference signals Structure: perceptual coder 49 (as shown in Fig. 2) including: perceptual processor 93 (as shown in Fig. 12 and its internal circuitry in Figs. 13 and 14 and described at cols. 19:1- 23:46), including the transformed image information with the mean removed $\dot{I}_T(t-4)$ and mean signal M(t-4) input into this		signal based on said applied frame signals to control coding error signals created in said coder in the course of coding of said frame difference signals Structure: perceptual coder 49 (as shown in Figure 2), including rate processor 91 (as shown in Figure 12 and described at 22:36-23:40) [The Court requests the parties to discuss the structure that goes with the additional limitation of "where said control means is further responsive to said applied frame signals …"at the hearing.]

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			element and the perceptual thresholds PTij(t-4) output by this element; rate processor 91 further including signal standard deviation values σ as an input; and multiplier 92 (as shown in Fig. 12 and described at cols. 19:56-63 and 23:41-43), including distortion level D and perceptual thresholds PTij(t-4) input to this element and target distortion levels output by this element		
		consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29 **frame:** a complete set of	*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete picture		*consistent with claims 1, 4, 6, 17, 26, 27, 28 and 29* **frame:** a complete set of

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		digital representations for an image	from a video sequence		digital representations for an image

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Case No. 09-cv-0278-H (CAB)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
1. A method of encoding a video signal, comprising the steps of: generating a set of frequency coefficient signals, the set representing the video signal, and corresponding to an NxM matrix, wherein each of the frequency coefficient signals corresponds to a predetermined horizontal coordinate and a predetermined vertical coordinate in the matrix;	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	a rectangular array of elements, at least 2 elements high and 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
scanning a first subset of the frequency coefficient signals within the set in a predetermined first subset scanning order, as represented by the following list of coordinate pairs, each pair representing a horizontal and vertical coordinate in the matrix,	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
to create an ordered set of frequency coefficient signals: (0, 0), (0, 1), (0, 2), (0, 3), (1, 0), (1, 1), (2, 0), (2, 1), (1, 2), (1, 3), (0, 4), (0, 5), (0, 6), (0, 7) (1, 7); and,					
	scanning a first subset of the frequency coefficient signals: organizing a first subset of frequency coefficients into a sequence prior to encoding	**scanning a first subset of the frequency coefficient:** organizing a first subset of frequency coefficients into a sequence prior to encoding	**scanning a first subset of the frequency coefficient:** organizing a first subset of frequency coefficients into a sequence prior to encoding		**scanning a first subset of the frequency coefficient signals:** organizing a first subset of frequency coefficients into a sequence prior to encoding
generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals.		*consistent with claims 1, 7, 13, 19* **generating an encoded video signal:**	*consistent with claims 1, 7, 13, 19* **generating an encoded video signal:**	generating a video signal using variable word length encoding	*consistent with claims 1, 7, 13, 19* **generating an encoded video signal:**

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		generating a video signal using variable word length encoding or other entropy encoding	generating a video signal using variable length encoding		generating a video signal using variable word length encoding
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
2. The method of claim 1 wherein the scanning step is performed in response to a **frame format** associated with the video signal.		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete picture from a video sequence		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image
		consistent with claims 2, 3, 7, 14, 15 and 19	*consistent with claims 2, 3, 7, 14, 15 and 19*	interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:**

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		frame format: interlaced format or progressive format	**frame format:** interlaced formatted picture or progressive formatted picture		interlaced format or progressive format
3. The method of claim 2 in which the **frame format** is an interlaced frame format.		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete picture from a video sequence		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image
		consistent with claims 2, 3, 7, 14, 15 and 19 **frame format:** interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced formatted picture or progressive formatted picture	interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced format or progressive format
4. The method of claim 1 further including a step of scanning a second subset of the frequency coefficient signals within the set in	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
a predetermined second subset scanning order such that the ordered set includes frequency coefficient signals in the second subset, wherein the second subset scanning order is represented by the following list of coordinate pairs: (1, 6), (1, 5), (1, 4), (2, 3), (2, 2), (3, 0), (3, 1), (4, 0), (4, 1), (3, 2), (3, 3), (2, 4), (2, 5), (2, 6), (2, 7).	the sequence into which frequency coefficients are organized prior to encoding	the sequence into which frequency coefficients are organized prior to encoding	the sequence into which frequency coefficients are organized prior to encoding		the sequence into which frequency coefficients are organized prior to encoding
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)		frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
5. The method of claim 4 further including a step of scanning a third subset of the frequency coefficient signals within the set in a predetermined third subset scanning order such that the ordered set includes the scanned frequency coefficient signals in the third subset, wherein the third subset scanning order is represented by the following list of coordinate pairs: (3, 4), (3, 5), (3, 6), (3,	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
7), (4, 2), (4, 3), (5, 0), (5, 1), (6, 0), (6, 1), (5, 2), (5, 3), (4, 4), (4, 5), (4, 6) (4, 7).					
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
6. The method of claim further including a step of scanning a fourth subset of the frequency coefficient signals within the set in a	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
predetermined fourth subset scanning order such that the ordered set includes the scanned frequency coefficient signals in the fourth subset, wherein the fourth subset scanning order is represented by the following list of coordinate pairs: (5,4), (5, 5), (5, 6), (5, 7), (6, 2), (6, 3), (7, 0), (7, 1), (7, 2), (7, 3), (6, 4), (6, 5), (6, 6), (6, 7), (7, 4), (7, 5), (7, 6), (7, 7).	the sequence into which frequency coefficients are organized prior to encoding	the sequence into which frequency coefficients are organized prior to encoding	the sequence into which frequency coefficients are organized prior to encoding.		the sequence into which frequency coefficients are organized prior to encoding
	consistent with claims 1, 7, 13 and 19	*consistent with claims 1, 7, 13 and 19*	*consistent with claims 1, 7, 13 and 19*	signals containing frequency coefficients created by	*consistent with claims 1, 7, 13 and 19*

Amended Claim Construction Chart – U.S. Patent No. 5,500,678
United States District Court, Southern District of California
Case No. 09-cv-0278-H (CAB)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	frequency coefficient signals: signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	**frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	**frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	transform coding, such as the discrete cosine transform (DCT)	**frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
7. A method for encoding a video signal, comprising the steps of: generating a set of frequency coefficient signals, the set representing the video signal, wherein the set corresponds to an NxM matrix and each of the frequency coefficient signals corresponds to a predetermined horizontal coordinate and a predetermined vertical coordinate in	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)

Amended Claim Construction Chart – U.S. Patent No. 5,500,678
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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
the matrix;					
	consistent with claims 1, 7, 13 and 19 **NxM matrix:** a rectangular array of elements, at least 2 elements high and 2 at least elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	a rectangular array of elements, at least 2 elements high and 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and 2 at least elements wide
alternatively selecting between a first scanning order and a second scanning order in response to a frame format associated with the video signal;		*consistent with claims 7 and 19* alternatively selecting a pre-determined scanning order in response to whether the video signal is associated with progressive format or interlaced format	*consistent with claims 7 and 19* alternatively selecting a predetermined scanning order in response to whether the picture is progressive format or interlaced format	The Court construes the entire phrase as: alternatively selects a pre-determined scanning order in response to whether the video signal is progressive format or interlaced format	*consistent with claims 7 and 19* The Court construes the entire phrase as: alternatively selects a pre-determined scanning order in response to whether the video signal is progressive format or interlaced format
	consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12,	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12,*	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12,*	the sequence into which frequency coefficients	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12,*

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	13, 16, 17, 18, 19 **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	are organized prior to encoding.	*13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding
		consistent with claims 2, 3, 7, 14, 15 and 19 **frame:** a complete set of digital representations for an image	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete picture from a video sequence		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image
		consistent with claims 2, 3, 7, 14, 15 and 19 **frame format:** interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced formatted picture or progressive formatted picture	interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced format or progressive format
scanning the set of	**scanning the set of**	**scanning the set of**	**scanning the set of**	organizing the	**scanning the set of**

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
frequency coefficient signals according to the selected scanning order to create an ordered set of frequency coefficient signals; and	**frequency coefficient signals:** organizing the frequency coefficients into a sequence prior to encoding	**frequency coefficient signals:** organizing the frequency coefficients into a sequence prior to encoding	**frequency coefficient signals:** organizing the frequency coefficients into a sequence prior to encoding	frequency coefficients into a sequence prior to encoding	**frequency coefficient signals:** organizing the frequency coefficients into a sequence prior to encoding
	frequency coefficient signals: *consistent with claims 1, 7, 13 and 19* signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	**frequency coefficient signals:** *consistent with claims 1, 7, 13 and 19* signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	**frequency coefficient signals:** *consistent with claims 1, 7, 13 and 19* signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19 **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding
generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals.		*consistent with claims 1, 7, 13, 19* **generating an encoded video signal** generating a video signal using variable word length encoding or other entropy encoding	*consistent with claims 1, 7, 13, 19* **generating an encoded video signal** generating a video signal using variable word length encodingr	generating a video signal using variable word length encoding	*consistent with claims 1, 7, 13, 19* **generating an encoded video signal** generating a video signal using variable word length encoding

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
8. The method of claim 7 in which the first scanning order comprises a zigzag scanning order.	**zigzag scanning order:** the scanning order shown in Fig. 3 for an 8x8 block, which may be scaled to fit different block sizes provided that the scanning procedure remains the same as that shown in Fig. 3	**zigzag scanning order:** MPT agrees with Defendants' proposed construction for this term.	**zigzag scanning order:** the scanning order shown in Fig. 3 for an 8x8 block, which may be scaled to fit different block sizes provided that the scanning procedure remains the same as that shown in Fig. 3.	the scanning order shown in Fig. 3 for an 8x8 block, which may be scaled to fit different block sizes provided that the scanning procedure remains the same as that shown in Fig. 3.	**zigzag scanning order:** the scanning order shown in Fig. 3 for an 8x8 block, which may be scaled to fit different block sizes provided that the scanning procedure remains the same as that shown in Fig. 3
	consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*	the sequence into which frequency coefficients are organized prior to	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*

Amended Claim Construction Chart – U.S. Patent No. 5,500,678
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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	scanning order: the sequence into which frequency coefficients are organized prior to encoding	**scanning order:** the sequence into which frequency coefficients are organized prior to encoding	**scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	encoding.	**scanning order:** the sequence into which frequency coefficients are organized prior to encoding
9. The method of claim 7 in which the second scanning order includes a first subset scanning order represented by the following list of coordinate pairs, each pair representing a horizontal and vertical coordinate in the matrix: (0, 0), (0, 1), (0, 2), (0, 3), (1, 0), (1, 1), (2, 0), (2, 1), (1, 2), (1, 3), (0, 4), (0, 5), (0, 6), (0, 7) (1, 7)	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding
10. The method of claim 9 in which the second scanning order further includes a second subset	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19*

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
scanning order matrix such that the ordered set includes frequency coefficient signals in a second subset, the second subset scanning order represented by the following list of coordinate pairs, each pair representing a horizontal and vertical coordinate in the matrix: (1, 6), (1, 5), (1,4), (2, 3), (2, 2), (3, 0), (3, 1), (4, 0), (4, 1), (3, 2), (3, 3), (2, 4), (2, 5), (2, 6), (2, 7).	**scanning order:** the sequence into which frequency coefficients are organized prior to encoding	**scanning order:** the sequence into which frequency coefficients are organized prior to encoding	**scanning order:** the sequence into which frequency coefficients are organized prior to encoding.		**scanning order:** the sequence into which frequency coefficients are organized prior to encoding
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	coding, such as the discrete cosine transform (DCT)	coding, such as the discrete cosine transform (DCT)	coding, such as the discrete cosine transform (DCT)		coding, such as the discrete cosine transform (DCT)
11. The method of claim in which the second scanning order further includes a third subset scanning order matrix such that the ordered set includes frequency coefficient signals in a third subset, the third subset scanning order represented by the following list of coordinate pairs, each pair representing a horizontal and vertical coordinate in the matrix: (3, 4), (3, 5), (3, 6), (3, 7), (4, 2), (4, 3), (5, 0), (5, 1), (6, 0), (6, 1), (5, 2), (5, 3), (4, 4), (4, 5), (4, 6) (4, 7).	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding
	consistent with claims 1,	*consistent with claims 1,*	*consistent with claims 1,*	signals containing	*consistent with claims 1,*

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
12. The method of claim 11 in which the second scanning order further includes a fourth subset scanning order matrix such that the ordered set includes frequency coefficient signals in the fourth subset, the fourth subset scanning order represented by the following list of coordinate pairs, each pair representing a horizontal and vertical	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
coordinate in the matrix: (5,4), (5, 5), (5, 6), (5, 7), (6, 2), (6, 3), (7, 0), (7, 1), (7, 2), (7, 3), (6, 4), (6, 5), (6, 6), (6, 7), (7, 4), (7, 5), (7, 6), (7, 7).					
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
13. An apparatus for encoding a video signal, comprising: a **discrete cosine transform coefficient generator** for generating a set of frequency coefficient		*consistent with claims 13 and 19* **discrete cosine transform coefficient generator:**	*consistent with claims 13 and 19* **discrete cosine transform coefficient generator:**	hardware, which may include a general-purpose processor programmed with appropriate software, that uses a discrete cosine transform to	*consistent with claims 13 and 19* **discrete cosine transform coefficient generator:**

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
signals, the set representing the video signal and corresponding to an NxM matrix, wherein each of the frequency coefficient signals corresponds to a predetermined horizontal coordinate and a predetermined vertical coordinate in the matrix		hardware, which may include one or more circuits or processors programmed with appropriate software, that uses a discrete cosine transform or similar transform to create frequency coefficients	hardware, which may include a general-purpose processor programmed with appropriate software, that uses a discrete cosine transform to create frequency coefficients	create frequency coefficients	hardware, which may include a general-purpose processor programmed with appropriate software, that uses a discrete cosine transform to create frequency coefficients
	consistent with claims 1, 7, 13 and 19 **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide	a rectangular array of elements, at least 2 elements high and 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:** a rectangular array of elements, at least 2 elements high and at least 2 elements wide

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
a scanner for scanning a first subset of the frequency coefficient signals within the set in a predetermined first subset scanning order, as represented by the following list of coordinate pairs, each pair representing a horizontal and vertical coordinate in the matrix, to create an ordered set of frequency coefficient signals: (0, 0), (0, 1), (0, 2), (0, 3), (1, 0), (1, 1), (2, 0), (2, 1), (1, 2), (1, 3), (0, 4), (0, 5), (0, 6), (0, 7) (1, 7); and,	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding.	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding
means for generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals		*consistent with claims 13 and 19* Function: generating an encoded video signal, the encoded video signal including the	*consistent with claims 13 and 19* This limitation must be construed under 35 U.S.C. § 112(6).		*consistent with claims 13 and 19* Function: generating an encoded video signal, the encoded video signal including the

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		ordered set of frequency coefficient signals Structure: (a) variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-16); or (b) encoder 190 (as shown in Fig. 1 and as described at col. 2:53-57).	Function: generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals Structure: variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-37).		ordered set of frequency coefficient signals Structure: variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-37).
		consistent with claims 1, 7, 13, 19 **generating an encoded video signal:** generating a video signal using variable word length encoding or other entropy encoding	*consistent with claims 1, 7, 13, 19* **generating an encoded video signal:** generating a video signal using variable word length encoding	generating a video signal using variable word length encoding	*consistent with claims 1, 7, 13, 19* **generating an encoded video signal:** generating a video signal using variable word length encoding
14. The apparatus of claim 13 in which the scanner performs the		*consistent with claims 2, 3, 7, 14, 15 and 19*	*consistent with claims 2, 3, 7, 14, 15 and 19*		*consistent with claims 2, 3, 7, 14, 15 and 19*

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Case No. 09-cv-0278-H (CAB)

CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
scanning in response to a **frame format** associated with the video signal.		**frame:** a complete set of digital representations for an image	**frame:** a complete picture from a video sequence		**frame:** a complete set of digital representations for an image
		consistent with claims 2, 3, 7, 14, 15 and 19 **frame format:** interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced formatted picture or progressive formatted picture	interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced format or progressive format
15. The apparatus of claim 14 in which the frame format is an interlaced **frame format.**		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete picture from a video sequence		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image
		consistent with claims 2, 3, 7, 14, 15 and 19 **frame format:** interlaced format or	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced formatted	interlaced format or progressive format	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame format:** interlaced format or progressive format

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		progressive format	picture or progressive formatted picture		
19. An apparatus for encoding a video signal, comprising: a **discrete cosine transform generator** for generating a set of frequency coefficient signals, the set representing the video signal and corresponding to an NxM matrix, wherein each of the frequency coefficient signals corresponds to a predetermined horizontal coordinate and a predetermined vertical coordinate in the matrix;		*consistent with claims 13 and 19* **discrete cosine transform coefficient generator:** hardware, which may include one or more circuits or processors programmed with appropriate software, that uses a discrete cosine transform or similar transform to create frequency coefficients	*consistent with claims 13 and 19* **discrete cosine transform coefficient generator:** hardware, which may include a general-purpose processor programmed with appropriate software, that uses a discrete cosine transform to create frequency coefficients	hardware, which may include a general-purpose processor programmed with appropriate software, that uses a discrete cosine transform to create frequency coefficients	*consistent with claims 13 and 19* **discrete cosine transform coefficient generator:** hardware, which may include a general-purpose processor programmed with appropriate software, that uses a discrete cosine transform to create frequency coefficients
	consistent with claims 1, 7, 13 and 19 **NxM matrix:**	*consistent with claims 1, 7, 13 and 19* **NxM matrix:**	*consistent with claims 1, 7, 13 and 19* **NxM matrix:**	a rectangular array of elements, at least 2 elements high and 2 elements wide	*consistent with claims 1, 7, 13 and 19* **NxM matrix:**

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	a rectangular array of elements, at least 2 elements high and at least 2 elements wide	a rectangular array of elements, at least 2 elements high and at least 2 elements wide	a rectangular array of elements, at least 2 elements high and at least 2 elements wide		a rectangular array of elements, at least 2 elements high and at least 2 elements wide
	consistent with claims 1, 7, 13 and 19 **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
a scan selector for **alternatively selecting between a first scanning order and a second scanning order in response to a frame format associated with the video signal;**		*consistent with claims 7 and 19* alternatively selecting a pre-determined scanning order in response to whether the video signal is associated with progressive format or	*consistent with claims 7 and 19* alternatively selecting a predetermined scanning order in response to whether the picture is progressive format or interlaced format	The Court construed the entire element as: hardware, which may include a general-purpose processor programmed with appropriate software that alternatively selects a pre-determined	*consistent with claims 7 and 19* The Court construed the entire element as: hardware, which may include a general-purpose processor programmed with

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		interlaced format		scanning order in response to whether the video signal is progressive format or interlaced format	appropriate software that alternatively selects a pre-determined scanning order in response to whether the video signal is progressive format or interlaced format
	consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19 **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which frequency coefficients are organized prior to encoding
		consistent with claims 2, 3, 7, 14, 15 and 19 **frame:** a complete set of digital representations for an image	*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete picture from a video sequence		*consistent with claims 2, 3, 7, 14, 15 and 19* **frame:** a complete set of digital representations for an image
		consistent with claims 2,	*consistent with claims 2,*	interlaced format or	*consistent with claims 2,*

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		3, 7, 14, 15 and 19 **frame format:** interlaced format or progressive format	*3, 7, 14, 15 and 19* **frame format:** interlaced formatted picture or progressive formatted picture	progressive format	*3, 7, 14, 15 and 19* **frame format:** interlaced format or progressive format
a scanner for scanning the set of frequency coefficient signals according to the selected scanning order to create an ordered set of frequency coefficient signals; and,	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)	*consistent with claims 1, 7, 13 and 19* **frequency coefficient signals:** signals containing frequency coefficients created by transform coding, such as the discrete cosine transform (DCT)
	consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19 **scanning order:** the sequence into which	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which	the sequence into which frequency coefficients are organized prior to encoding.	*consistent with claims 1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19* **scanning order:** the sequence into which

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	frequency coefficients are organized prior to encoding	frequency coefficients are organized prior to encoding	frequency coefficients are organized prior to encoding.		frequency coefficients are organized prior to encoding
a means for generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals		*consistent with claims 13 and 19* Function: generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals Structure: (a) variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-16); or (b) encoder 190 (as shown in Fig. 1 and as described at col. 2:53-57).	*consistent with claims 13 and 19* This limitation must be construed under 35 U.S.C. § 112(6). Function: generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals Structure: variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-37)	Function: generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals Structure: variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-37)	*consistent with claims 13 and 19* Function: generating an encoded video signal, the encoded video signal including the ordered set of frequency coefficient signals Structure: variable word length encoder 990 (as shown in Fig. 9 and as described at 7:13-37)
		consistent with claims 1, 7, 13, 19	*consistent with claims 1, 7, 13, 19*	generating a video signal using variable word length encoding	*consistent with claims 1, 7, 13, 19*

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CLAIM LANGUAGE (Disputed Terms in BOLD)	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		generating an encoded video signal: generating a video signal using variable word length encoding or other entropy encoding	**generating an encoded video signal:** generating a video signal using a variable word length encoding		**generating an encoded video signal:** generating a video signal using variable word length encoding

[1]

[1] As corrected by the Certificate of Correction.

Amended Claim Construction Chart – U.S. Patent No. 5,227,878
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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
1. An apparatus for encoding digital video signals, comprising: **a means for receiving a digital video input signal comprising a succession of digital representations related to picture elements making up at least one frame of a video image, the frame comprising a plurality of interlaced fields**	Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal comprising a succession of digital representations related to picture elements making up at least one frame of a video image, the frame comprising a plurality of interlaced fields Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)		Function: receiving a digital video input signal comprising a succession of digital representations related to picture elements making up at least one frame of a video image, the frame comprising a plurality of interlaced fields Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image
		interlaced fields: one of the two (or more) parts into which a frame is divided in interlaced scanning	**interlaced fields:** a set of odd horizontal scan lines and a set of even horizontal scan lines that together make up a complete picture from a video sequence		**interlaced fields:** one of the two (or more) parts into which a frame is divided in interlaced scanning

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
a means for coding groups of digital representations related to frames of picture elements	Function: coding groups of digital representations related to frames of picture elements	Function: coding groups of digital representations related to frames of picture elements Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3 and Fig. 6 as described at col. 19:1-18); (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-19); and (c) visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3), or Figure 13 (as described at col. 24:61-col. 25:8).	Function: coding groups of digital representations related to frames of picture elements Structure: summing element 11 (as shown in Fig. 1A and as described at col. 6 lines 6-22) including the digital video input signal and estimate of the video input signal input to this element, and the signal output by this element relating to the error between the digital video input signal and the estimate signal; block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col. 19, lines 1-18) including the coding type signal and the digital video input		Function: coding groups of digital representations related to frames of picture elements Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3 and Fig. 6 as described at col. 19:1-18); (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-19); and (c) visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3), or Figure 13 (as described at col. 24:61-col. 25:8). [The Court requests the parties to discuss the summing element 11 at the

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			signal or the estimate error signal input to this element, and the blocks output by this element; discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30) including the blocks input to this element and the transform coefficients output by this element; visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 13, and as described at col. 7, line 27 - col. 8, line 5, col. 9, lines 19-22, col. 9, lines 34-37, col. 13, lines 22-25, and col. 24, line 61 - col. 25, line 8) including the transform coefficients, coding type signal, picture type signal, digital input		hearing.]

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			signal, estimate error signal, inter/intra type signal, and fullness signal input to this element, and the quantized transform coefficients and quantization parameter output by this element; scan selector circuit 23 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 14, and as described at col. 8, line 36 – col. 9, line 2 and col. 25, lines 9-25) including the quantized transform coefficients and coding type signal input to this element, and the ordered quantized transform coefficients output by this element; and variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36		

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			– col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the ordered quantized transform coefficients, block class signal, quantization parameter, picture type signal, differential dc coefficient prediction, variable word length table select signal and differential motion vectors input to this element, and the coded transform coefficients output by this element; including all interconnections between these elements		
		consistent with claims 1, 23, 24, 25 and 31 **groups of digital representations:** This term should be given its plain meaning to one of	*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** a number of macroblocks, submacroblocks, and		*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** This term should be given its plain meaning to one of

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		skill in the art, and therefore does not require construction.	blocks of picture elements, for example, 16x16 macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		skill in the art, and therefore does not require construction.
a means for coding groups of digital representations related to interlaced fields in the frames	Function: coding groups of digital representations related to interlaced fields in the frames	Function: coding groups of digital representations related to interlaced fields in the frames Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3 and Fig. 6 as described at col. 19:1-18); (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-7:19); and (c) visibility matrix selector and perceptual quantizer 19 (as shown in	Function: coding groups of digital representations related to interlaced fields in the frames Structure: summing element 11 (as shown in Fig. 1A and as described at col. 6 lines 6-22) including the digital video input signal and estimate of the video input signal input to this element, and the signal output by this element relating to the error between the digital video input signal and the estimate signal; block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as		Function: coding groups of digital representations related to interlaced fields in the frames Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3 and Fig. 6 as described at col. 19:1-18); (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-7:19); and (c) visibility matrix selector and perceptual quantizer 19 (as shown in

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3), or Figure 13 (as described at col. 24:61-col. 25:8).	shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col. 19, lines 1-18) including the coding type signal and the digital video input signal or the estimate error signal input to this element, and the blocks output by this element; discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30) including the blocks input to this element and the transform coefficients output by this element; visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 13, and as described at col. 7, line 27 - col. 8, line 5, col. 9, lines 19-22, col. 9, lines 34-37,		Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3), or Figure 13 (as described at col. 24:61-col. 25:8). [The Court requests the parties to discuss the summing element 11 at the hearing.]

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			col. 13, lines 22-25, and col. 24, line 61 - col. 25, line 8) including the transform coefficients, coding type signal, picture type signal, digital input signal, estimate error signal, inter/intra type signal, and fullness signal input to this element, and the quantized transform coefficients and quantization parameter output by this element; scan selector circuit 23 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 14, and as described at col. 8, line 36 – col. 9, line 2 and col. 25, lines 9-25) including the quantized transform coefficients and coding type signal input to this element, and the ordered quantized transform coefficients output by this element; and		

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the ordered quantized transform coefficients, block class signal, quantization parameter, picture type signal, differential dc coefficient prediction, variable word length table select signal and differential motion vectors input to this element, and the coded transform coefficients output by this element; including all interconnections between these elements		
		consistent with claims 1, 23, 24, 25 and 31	*consistent with claims 1, 23, 24, 25 and 31*		*consistent with claims 1, 23, 24, 25 and 31*

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		groups of digital representations: This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.	**groups of digital representations:** a number of macroblocks, submacroblocks, and blocks of picture elements, for example, 16x16 macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		**groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
a means responsive to the digital video input signal for producing a field frame coding type signal which directs a selected one, but not both, of the frame coding means or the field coding means to code the digital video input signal		Function: producing a field frame coding type signal Structure: (1) block adaptive frame/field coding analyzer 14 (as shown in Fig. 1 and as described at col. 6:22-58, col. 5:66-6:3); and (2) thresholder and comparator 240 (as shown in Fig. 5 and as described at col. 18:57-61).	Function: producing a field frame coding type signal which directs a selected one, but not both, of the frame coding means or the field coding means to code the digital video input signal Structure: switching element 13a (as shown in Fig. 1A and as described at col. 13, lines 19-22) including the inter/intra type coding signal that controls this element; and		Function: producing a field frame coding type signal Structure: block adaptive frame/field coding analyzer 14 (as shown in Fig. 1 and as described at col. 6:22-58, col. 5:66- 6:3) [The Court requests the parties to discuss the switching element 13a and threshold and comparator 240.]

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			block adaptive frame/field coding analyzer 14 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 5, and as described at col. 6, lines 22-58 and col. 18, lines 11-68) including the digital video input signal or the estimate error signal input to this element, and the coding type signal output by this element; and including the interconnection between these elements		
		consistent with claims 1, 14, 17, 23 and 26 **coding type:** frame or field coding	*consistent with claims 1, 14, 17, 23 and 26* **coding type:** frame coding or interlaced field coding		*consistent with claims 1, 14, 17, 23 and 26* **coding type:** frame or field coding
2. The encoding apparatus of claim 1, in which the **fields** comprise alternating horizontal scan lines of the **frames**		**fields:** The "fields" in this claim refer to "interlaced fields" of claim 1.	*consistent with claims 2, 23, 24 and 31* **fields:** a set of odd horizontal		*consistent with claims 2, 23, 24 and 31* **fields:** subsets of a frame

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			scan lines and a set of even horizontal scan lines that together make up a complete picture from a video sequence		consisting of groups of contiguous picture elements
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image
13. An apparatus for decoding a compressed digital video signal, comprising: a **means for receiving a compressed digital video bit stream**; and	Function: receiving a compressed digital video bit steam Structure: input line 50 (as shown in Fig. 2 and described at col. 14 , lines 8-10)	Plaintiff agrees with Defendants' proposed construction. However, plaintiff disputes that it is collaterally estopped.	*MPT is collaterally estopped from relitigating this term.* Function: receiving a compressed digital video bit steam Structure: input line 50 (as shown in Fig. 2 and described at col. 14 , lines 8-10)	Function: receiving a compressed digital video bit stream Structure: input line 50 (as shown in Fig. 2 and described at col. 14, lines 8-10)	Function: receiving a compressed digital video bit stream Structure: input line 50 (as shown in Fig. 2 and described at col. 14, lines 8-10)
a **means responsive to a motion compensation type signal for selectively and adaptively performing motion**	Function: selectively and adaptively performing motion compensated decoding of frames of the compressed digital video	Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term.	*MPT is collaterally estopped from relitigating this term.* Structure: circuit 100 (as	Function: selectively and adaptively performing motion compensated decoding of frames of the compressed	Function: selectively and adaptively performing motion compensated decoding of frames of the compressed digital video

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compensated decoding of frames of the compressed video bit stream and fields of the compressed video bit stream.	bit stream and fields of the compressed video bit stream	Structure: (a) decoder 54 (as shown in Fig. 2 and described at col. 14:10-15, 8:62-68); (b) block unformatter 72A (as described at col. 14:56-61, 6:59-66, col. 5:66-6:3) and Fig. 7 (as described at 19:19- 38); (c) summing element 74 (as described at col. 14:60-68); and (d) estimation circuit 100 (as shown in Fig. 2, and as described at col. 15:23-42), and i. Fig. 3 (as described at col. 15:47-col. 16:27, including previous picture store 100c) or ii. Fig. 4 (as described at col. 16:28-col. 18:10, including previous picture store 100c and next picture	shown in Fig. 2 and its internal circuitry as shown in Figs. 3, 4A, and 4B and as described at col. 15 line 22 to col. 18 line 10); circuit 94 (as shown in Fig. 2 and the circuitry within circuit 94 as shown and described in Figs. 15, 16A, and 16B, and the description of circuit 94 and its internal circuitry set forth in col. 15 lines 11-28 and in col. 25 line 26 to col. 27 line 34); summing element 92; picture stores 100C and 100A; circuit 54 (as shown in Fig. 2, and as described in Fig. 12 and at col. 14 lines 5-68 and col. 24 lines 47-60); circuit 80 (as shown in Fig. 2 and as described at col. 15 lines 4-10); and including all interconnections of these elements	digital video bit stream and fields of the compressed video bit stream Structure: circuit 100 (as shown in Fig. 2 and its internal circuitry as shown in Figs. 3, 4A, and 4B and as described at col. 15 line 22 to col. 18 line 10); circuit 94 (as shown in Fig. 2 and the circuitry within circuit 94 as shown and described in Figs. 15, 16A, and 16B, and the description of circuit 94 and its internal circuitry set forth in col. 15 lines 11-28 and in col. 25 line 26 to col. 27 line 34); summing element 92; picture stores 100C and 100A; circuit 54 (as shown in Fig. 2, and as described in Fig. 12 and at col. 14 lines 5-68 and col. 24 lines 47-60); circuit 80 (as shown in	bit stream and fields of the compressed video bit stream Structure: circuit 100 (as shown in Fig. 2 and its internal circuitry as shown in Figs. 3, 4A, and 4B and as described at col. 15 line 22 to col. 18 line 10); circuit 94 (as shown in Fig. 2 and the circuitry within circuit 94 as shown and described in Figs. 15, 16A, and 16B, and the description of circuit 94 and its internal circuitry set forth in col. 15 lines 11-28 and in col. 25 line 26 to col. 27 line 34); summing element 92; picture stores 100C and 100A; circuit 54 (as shown in Fig. 2, and as described in Fig. 12 and at col. 14 lines 5-68 and col. 24 lines 47-60); circuit 80 (as shown in Fig. 2 and as described at col.

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		store 100a) or iii. Fig. 3 and Fig. 4 (as described at col. 15:47-18:10, including previous picture store 100c and next picture store 100a)		Fig. 2 and as described at col. 15 lines 4-10); and including all interconnections of these elements	15 lines 4-10); and including all interconnections of these elements
		consistent with claims 13, 15 and 31 **motion compensation type signal:** a signal that identifies one of two or more available modes of motion compensation to be used in motion compensation However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 31* **motion compensation type signal:** *MPT is collaterally estopped from relitigating this term.* a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal	a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal	*consistent with claims 13, 15 and 31* **motion compensation type signal:** a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		image			image
	consistent with claims 13, 15 and 23-26 **selectively:** in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 23-26* ***selectively:*** *MPT is collaterally estopped from relitigating this term.* in a manner that selects from among two or more options	in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options
		consistent with claims 13, 26 and 32 **adaptively:** Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. The term should be construed as "capable of changing in response to a condition"	**adaptively:** *MPT is collaterally estopped from relitigating this term.* in a manner that changes in response to the motion compensation type signal	in a manner that changes in response to the motion compensation type signal	*consistent with claims 13, 26 and 32* **adaptively:** in a manner that changes in response to the motion compensation type signal
	motion compensated decoding:	**motion compensated decoding:**	**motion compensated decoding:** *MPT is collaterally*	decoding a compressed video signal using data representing	**motion compensated decoding:**

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	decoding a compressed video signal using data representing motion vectors that was produced and transmitted during the compression process, where "decoding" means taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	decoding a compressed video signal using data representing motion vectors that was produced and transmitted during the compression process, where "decoding" means taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal However, plaintiff disputes that it is collaterally estopped.	*estopped from relitigating this term.* decoding a compressed video signal using data representing motion vectors that was produced and t1616ransmitted during the compression process, where "decoding" means taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	motion vectors that was produced and transmitted during the compression process, where "decoding" means taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	decoding a compressed video signal using data representing motion vectors that was produced and transmitted during the compression process, where "decoding" means taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal
	consistent with claims 13, 14, 15 and 17 **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** Plaintiff agrees with Defendants' proposed construction. However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 14, 15 and 17* **decoding:** *MPT is collaterally estopped from relitigating this term.* taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original	taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			video signal		
		selectively and adaptively performing motion compensated decoding: Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. This term should be construed as "performing motion compensated decoding in a manner that selects from among two or more options and that changes in response to a condition"	**selectively and adaptively performing motion compensated decoding:** *MPT is collaterally estopped from relitigating this term.* performing motion compensated decoding in a manner that selects from among two or more options and that changes in response to the motion compensation type signal	performing motion compensated decoding in a manner that selects from among two or more options and that changes in response to the motion compensation type signal	**selectively and adaptively performing motion compensated decoding:** performing motion compensated decoding in a manner that selects from among two or more options and that changes in response to the motion compensation type signal

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
14. The apparatus of claim 13, in which the **decoding** means comprises:	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 14, 15 and 17* **decoding:** *MPT is collaterally estopped from relitigating this term.* taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
an adaptive inverse scanning means responsive to a coding type signal.		This element is not governed by 35 U.S.C. § 112(6). If the Court determines that this element must be construed under 35 U.S.C. § 112(6), the Court should construe the element as follows: Function: performing inverse scanning Structure: (1) inverse scan selector 64 (as shown in Fig. 2 and as described at col. 14:18-23); or (2) Fig. 14 (as described at col. 25:9-25).	Function: adaptive inverse scanning responsive to a coding type signal Structure: inverse scan selector 64 (as shown in Fig. 2 and its internal circuitry as shown in Fig. 14, and as described at col. 14 lines 18-23 and col. 25 lines 9-25; configured to choose between at least two of the vertical scan pattern, the zigzag scan pattern, and the scan patterns shown in Figs. 1E and 1F) including the DCT coefficients, inter/intra type signal and coding type signal input to this element, and the inverse ordered DCT coefficients output by this element		Function: adaptive inverse scanning responsive to a coding type signal Structure: (1) inverse scan selector 64 (as shown in Fig. 2 and as described at col. 14:18-23); or (2) Fig. 14 (as described at col. 25:9-25).
		consistent with claims 14, 15, 31 and 33 **adaptive:** Plaintiff disputes that it is collaterally estopped from	*consistent with claims 14, 31 and 33* **adaptive:** *No construction is necessary. This term*		*consistent with claims 14, 31 and 33* **adaptive:** No construction is necessary. This term

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		offering a proposed construction for this term. This term should be construed consistent with the term "adaptively," defined above, as "capable of changing in response to a condition"	*should be given its ordinary meaning.*		should be given its ordinary meaning.
		coding type: *consistent with claims 1, 14, 17, 23 and 26* frame or field coding	**coding type:** *consistent with claims 1, 14, 17, 23 and 26* frame coding or interlaced field coding		*consistent with claims 1, 14, 17, 23 and 26* **coding type:** frame or field coding
15. The apparatus of claim 13, in which the **decoding** means comprises:	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal However, plaintiff disputes that it is collaterally	*consistent with claims 13, 14, 15 and 17* **decoding:** *MPT is collaterally estopped from relitigating this term.* taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		estopped.			
a **means responsive to a motion compensation type signal and selectively responsive to frame motion vectors and field motion vectors for producing an adaptive motion compensated estimate of a decoded video signal**;	Function: producing an adaptive motion compensated estimate of a decoded video signal	Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. Structure: estimation circuit 100 (as shown in Fig. 2 and as described at col. 15:23-42) and i. Fig. 3 (as described at col. 15:47-col. 16:27, including previous picture store 100c) or ii. Fig. 4 (as described at col. 16:28-col. 18:10, including previous picture store 100c and next picture store 100a), or iii. Fig. 3 and Fig. 4 (as described at col. 15:47-18:10, including previous picture store 100c and next picture store 100a).	*MPT is collaterally estopped from relitigating this term.* Structure: circuit 100 (as shown in Fig. 2 and its internal circuitry as shown in Figs. 3, 4A, and 4B and as described at col. 15 line 22 to col. 18 line 10); and picture stores 100C and 100A; including interconnections of these elements	Function: producing an adaptive motion compensated estimate of a decoded video signal Structure: circuit 100 (as shown in Fig. 2 and its internal circuitry as shown in Figs. 3, 4A, and 4B and as described at col. 15 line 22 to col. 18 line 10); **[ ]** and picture stores 100C and 100A; including interconnections of these elements	Function: producing an adaptive motion compensated estimate of a decoded video signal Structure: circuit 100 (as shown in Fig. 2 and its internal circuitry as shown in Figs. 3, 4A, and 4B and as described at col. 15 line 22 to col. 18 line 10); **[ ]** and picture stores 100C and 100A; including interconnections of these elements

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
	consistent with claims 13, 15 and 23-26 **selectively:** in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 23-26* ***selectively:*** *MPT is collaterally estopped from relitigating this term.* in a manner that selects from among two or more options	in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options
	frame motion vectors: motion vectors for producing signals representing frames of picture elements	**frame motion vectors:** motion vectors for producing signals representing frames of picture elements However, plaintiff disputes that it is collaterally estopped.	**frame motion vectors:** *MPT is collaterally estopped from relitigating this term.* motion vectors for producing signals representing frames of picture elements	motion vectors for producing signals representing frames of picture elements	**frame motion vectors:** motion vectors for producing signals representing frames of picture elements
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		consistent with claims 13, 15 and 31 **motion compensation type signal:** a signal that identifies one of two or more available modes of motion compensation to be used in motion compensation However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 31* **motion compensation type signal:** *MPT is collaterally estopped from relitigating this term.* a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal	a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal	*consistent with claims 13, 15 and 31* **motion compensation type signal:** a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal
	decoded video signal: a video signal that has been decoded	**decoded video signal:** a video signal that has been decoded. However, plaintiff disputes that it is collaterally estopped.	**decoded video signal:** *MPT is collaterally estopped from relitigating this term.* a video signal that has been decoded	a video signal that has been decoded	**decoded video signal:** a video signal that has been decoded
		consistent with claims 14, 15, 31 and 33 **adaptive:** Plaintiff disputes that it is collaterally estopped from	**adaptive:** *MPT is collaterally estopped from relitigating this term.* capable of changing in response to the motion	capable of changing in response to the motion compensation type signal	*consistent with claims 14, 15, 31 and 33* **adaptive:** capable of changing in response to the motion

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		offering a proposed construction for this term. This term should be construed consistent with the term "adaptively," defined above, as "capable of changing in response to a condition"	compensation type signal		compensation type signal
	field motion vectors: motion vectors for producing signals representing fields of picture elements	**field motion vectors:** motion vectors for producing signals representing fields of picture elements However, plaintiff disputes that it is collaterally estopped.	**field motion vectors:** *MPT is collaterally estopped from relitigating this term.* motion vectors for producing signals representing fields of picture elements	motion vectors for producing signals representing fields of picture elements.	**field motion vectors:** motion vectors for producing signals representing fields of picture elements
a **means responsive to the compressed digital video bit stream for producing a decoded estimate error signal**; and,	Function: producing a decoded estimate error signal	Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. Function: producing a decoded estimate error signal Structure: (a) decoder and	*MPT is collaterally estopped from relitigating this term.* Function: producing a decoded estimate error signal Structure: (as shown in Figs. 2, 7, 12, 13, and 14 and as described at col.14	Function: producing a decoded estimate error signal Structure: (as shown in Figs. 2, 7,12, 13, and 14 and as described at col.14 lines 5-68, at col. 19 lines 19-38, and at col. 24 line 47 to col. 25 line 25): circuit 54; circuit 64	Function: producing a decoded estimate error signal Structure: (as shown in Figs. 2, 7,12, 13, and 14 and as described at col.14 lines 5-68, at col. 19 lines 19-38, and at col. 24 line 47 to col. 25 line 25): circuit 54; circuit 64

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		demultiplexer 54 (as shown in Fig. 2 and as described at col.14:10-18, col. 8:62-9:2, col. 9:14-22); (b) inverse scan selector 64 (as shown in Fig. 2 and as described at col. 14:18-23); (c) visibility matrix and dequantizer 66 (as shown in Fig. 2 and as described at col. 14:23-31, col. 7:27-45, col. 5:66- 6:3); (d) inverse discrete cosine transform circuit 72 (as shown in Fig. 2 and as described at col. 14:45-50); and (e) block unformatting circuit 72A (as shown in Fig. 2 and as described at col.14:56-61, col. 5:66-6:3, and col. 6:59-66, and Fig. 7 as described at col. 19:19-38).	lines 5-68, at col. 19 lines 19-38, and at col. 24 line 47 to col. 25 line 25): circuit 54; circuit 64 (see Fig. 14 for internal circuitry); circuit 66 (see Fig. 13 for internal circuitry); circuit 72; and circuit 72A (see Fig. 7 for internal circuitry); and all interconnections between these elements	(see Fig. 14 for internal circuitry); circuit 66 (see Fig. 13 for internal circuitry); circuit 72; and circuit 72A (see Fig. 7 for internal circuitry); and all interconnections between these elements	(see Fig. 14 for internal circuitry); circuit 66 (see Fig. 13 for internal circuitry); circuit 72; and circuit 72A (see Fig. 7 for internal circuitry); and all interconnections between these elements

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a **means responsive to the adaptive motion compensated estimate and the estimate error signal for producing a decoded video signal**.	Function: producing a decoded video signal	Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. Function: producing a decoded video signal Structure: summing element 74 (as shown in Fig. 2 and as described at col. 14:50-68)	*MPT is collaterally estopped from relitigating this term.* Function: producing a decoded video signal Structure: (as shown in Fig. 2 and as described at col. 14 lines 50-68): summing element 74 and including all inputs and outputs of this element	Function: producing a decoded video signal Structure: (as shown in Fig. 2 and as described at col. 14 lines 50-68): summing element 74 and including all inputs and outputs of this element	Function: producing a decoded video signal Structure: (as shown in Fig. 2 and as described at col. 14 lines 50-68): summing element 74 and including all inputs and outputs of this element
17. The apparatus of claim 13, in which the **decoding** means comprises:	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 14, 15 and 17* **decoding:** *MPT is collaterally estopped from relitigating this term.* taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal	*consistent with claims 13, 14, 15 and 17* **decoding:** taking a compressed version of a video signal and reproducing either the original video signal or an estimate of the original video signal

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a **means for receiving a compressed digital video signal comprising at least one DC coefficient representation related to the video signal**;		Function: receiving a compressed digital video signal Structure: input line 50 (as shown in Fig. 2 and described at col. 14:8-10)	Function: receiving a compressed digital video signal comprising at least one DC coefficient representation related to the video signal Structure: variable word length decoder and demultiplexer 54 (as shown in Fig. 2 and as described at col. 14, lines 10-18, and the inverse of the operation of the encoder and multiplexer 24, as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, col. 13, line 63 – col. 14, line 1) including the bit stream input to this element		Function: receiving a compressed digital video signal comprising at least one DC coefficient representation related to the video signal Structure: input line 50 (as shown in Fig. 2 and described at col. 14:8-10) variable word length decoder and demultiplexer 54 (as shown in Fig. 2 and as described at col. 14, lines 10-18, and the inverse of the operation of the encoder and multiplexer 24, as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, col. 13, line 63 – col. 14, line 1) including the bit stream input to this element
a **means for producing an estimated DC coefficient in response to a coding**		Function: producing an estimated DC coefficient	Function: producing an estimated DC coefficient in response to a coding		Function: producing an estimated DC coefficient in response to a coding type

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type signal; and,		Structure: prediction circuit 60 (as shown in Fig. 2 and as described at col. 14:37-40, col. 5:66-6:3)	type signal Structure: intra DC coefficient prediction circuit 60 (as shown in Fig. 2, as described at col. 14, lines 36-39, and configured to operate in accordance with Fig. 8 (as described at col. 19, line 39 - col. 20, line 64) and Fig. 9 (as described at col. 20, line 65 – col. 21, line 49)) including the intra DC coefficient signal and coding type signal input to this element, and the intra DC coefficient prediction signal output by this element		signal Structure: prediction circuit 60 (as shown in Fig. 2 and as described at col. 14:37-40, col. 5:66-6:3), configured to operate in accordance with Fig. 8 (as described at col. 19, line 39 - col. 20, line 64) [The Court requests the parties to discuss Figure 9, input signals, and output signals at the hearing.]
a **means for producing a decoded DC coefficient signal in response to the DC coefficient representation and the estimated DC coefficient**.		Function: producing a decoded DC coefficient signal Structure: summing element 58 (as shown in Fig. 2, and as described at col. 14:32-40)	Function: producing a decoded DC coefficient signal in response to the DC coefficient representation and the estimated DC coefficient Structure: summing element 58 (as shown in Fig. 2 and as described at		Function: producing a decoded DC coefficient signal in response to the DC coefficient representation and the estimated DC coefficient Structure: summing element 58 (as shown in Fig. 2, and as

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			col. 14, lines 31-39) including the differential DC coefficient signal and intra DC coefficient prediction signal input to this element, and the intra DC transform coefficient signal output by this element		described at col. 14:32-40)
		consistent with claims 1, 14, 17, 23 and 26 **coding type:** frame or field coding	*consistent with claims 1, 14, 17, 23 and 26* **coding type:** frame coding or interlaced field coding		*consistent with claims 1, 14, 17, 23 and 26* **coding type:** frame or field coding
23. An apparatus for encoding digital video signals, comprising: a **means for receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame**	Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame comprising a plurality of fields Structure: input line 10 (as		Function: receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame comprising a plurality of fields Structure: input line 10 (as shown in Fig. 1 and

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comprising a plurality of fields;			shown in Fig. 1 and described at col. 3:61-65)		described at col. 3:61-65)
		consistent with claims 23, 24 and 31 **fields:** subsets of a frame consisting of groups of contiguous picture elements	*consistent with claims 2, 23, 24 and 31* **fields:** a set of odd horizontal scan lines and a set of even horizontal scan lines that together make up a complete picture from a video sequence		*consistent with claims 23, 24 and 31* **fields:** subsets of a frame consisting of groups of contiguous picture elements
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image
a **means for selectively encoding groups of digital representations in the input signal relating to one of frames and fields**;	Function: selectively encoding groups of digital representations in the input signal relating to one of frames and fields	Function: selectively encoding groups of digital representations in the input signal relating to one of frames and fields Structure: (a) summing element 11 (as shown in Fig. 1 and as	Function: selectively encoding groups of digital representations in the input signal relating to one of frames and fields Structure: summing element 11 (as shown in Fig. 1A and as		Function: selectively encoding groups of digital representations in the input signal relating to one of frames and fields Structure: (a) summing element 11 (as shown in Fig. 1 and as

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		described at col. 6:6-22); (b) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3), and Fig. 6 (as described at col. 19:1-18); (c) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19); and (d) visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3) or Fig. 13 (as described at col. 24:61-col. 25:8).	described at col. 6 lines 6 – 22) including the digital video input signal and estimate of the video input signal input to this element, and the signal output by this element relating to the error between the digital video input signal and the estimate signal; block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col. 19, lines 1-18) including the coding type signal and the digital video input signal or the estimate error signal input to this element, and the blocks output by this element; discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19		described at col. 6:6-22); (b) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3), and Fig. 6 (as described at col. 19:1-18); (c) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19); and (d) visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3) or Fig. 13 (as described at col. 24:61-col. 25:8).

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			and col. 7, lines 27-30) including the blocks input to this element and the transform coefficients output by this element; visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 13, and as described at col. 7, line 27 - col. 8, line 5, col. 9, lines 19-22, col. 9, lines 34-37, col. 13, lines 22-25, and col. 24, line 61 - col. 25, line 8) including the transform coefficients, coding type signal, picture type signal, digital input signal, estimate error signal, inter/intra type signal, and fullness signal input to this element, and the quantized transform coefficients and quantization parameter output by this element; scan selector circuit 23 (as		

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			shown in Fig. 1A and its internal circuitry as shown in Fig. 14, and as described at col. 8, line 36 – col. 9, line 2 and col. 25, lines 9-25) including the quantized transform coefficients and coding type signal input to this element, and the ordered quantized transform coefficients output by this element; and variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the ordered quantized transform coefficients, block class signal, quantization parameter, picture type signal, differential dc coefficient		

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			prediction, variable word length table select signal and differential motion vectors input to this element, and the coded transform coefficients output by this element; including all interconnections between these elements		
		consistent with claims 23, 24 and 31 **fields:** subsets of a frame consisting of groups of contiguous picture elements	*consistent with claims 2, 23, 24 and 31* **fields:** a set of odd horizontal scan lines and a set of even horizontal scan lines that together make up a complete picture from a video sequence		*consistent with claims 23, 24 and 31* **fields:** subsets of a frame consisting of groups of contiguous picture elements
		consistent with claims 1, 23, 24, 25 and 31 **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and	*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** a number of macroblocks, submacroblocks, and blocks of picture elements,		*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and

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		therefore does not require construction.	for example, 16x16 macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		therefore does not require construction.
	consistent with claims 13, 15 and 23-26 **selectively:** in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 23-26* ***selectively:*** *MPT is collaterally estopped from relitigating this term.* in a manner that selects from among two or more options	in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image
a **means responsive to the video input signal prior to encoding to ascertain a predetermined**		Function: ascertain a predetermined characteristic present in the input signal	Function: ascertain a predetermined characteristic present in the input signal prior to		Function: ascertain a predetermined characteristic present in the input signal prior to

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characteristic present in the input signal prior to encoding for producing a field/frame encoding type signal which directs the encoding means to encode a selected one, but not both, of the groups of digital representations relating to frames and fields in the input signal.		Structure: (1) block adaptive frame/field coding analyzer 14 (as shown in Fig. 1 and as described at col. 6:22-58, col. 5:66-6:3); and (2) submacro block vertical correlation computer 244, submacro block vertical correlation computer 252, and macro block vertical correlation computer 236 (as shown in Fig. 5 and as described at col. 18:14-20, 18:27-51).	encoding for producing a field/frame encoding type signal which directs the encoding means to encode a selected one, but not both, of the groups of digital representations relating to frames and fields in the input signal Structure: switching element 13a (as shown in Fig. 1A and as described at col. 13, lines 19-22) including the inter/intra type coding signal that controls this element; and block adaptive frame/field coding analyzer 14 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 5, and as described at col. 6, lines 22-58 and col. 18, lines 11-68) including the video input signals or the estimate error signal input to this element, and the coding		encoding for producing a field/frame encoding type signal which directs the encoding means to encode a selected one, but not both, of the groups of digital representations relating to frames and fields in the input signal (1) block adaptive frame/field coding analyzer 14 (as shown in Fig. 1 and as described at col. 6:22-58, col. 5:66- 6:3); and (2) submacro block vertical correlation computer 244, submacro block vertical correlation computer 252, and macro block vertical correlation computer 236 (as shown in Fig. 5 and as described at col. 18:14-20, 18:27-51).

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			type signal output by this element; and including the interconnection between these elements		
		field/frame coding type: *consistent with claims 1, 14, 17, 23 and 26* frame or field coding	**field/frame coding type:** *consistent with claims 1, 14, 17, 23 and 26* frame coding or interlaced field coding		**field/frame coding type:** *consistent with claims 1, 14, 17, 23 and 26* frame or field coding
		consistent with claims 1, 23, 24, 25 and 31 **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.	*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** a number of macroblocks, submacroblocks, and blocks of picture elements, for example, 16x16 macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
24. The apparatus of claim 23, in which the means for encoding comprises a **means for selectively**	Function: selectively transforming first groups of digital representations relating to one of frames of	Function: selectively transforming first groups of digital representations relating to one of frames of	Function: selectively transforming first groups of digital representations relating to one of frames of		Function: selectively transforming first groups of digital representations relating to one of frames of

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transforming first groups of digital representations relating to one of frames of picture elements and fields of picture elements into second groups of digital representations relating to one of frames of picture elements and fields of picture elements.	picture elements and fields of picture elements into second groups of digital representations relating to one of frames of picture elements and fields of picture elements	picture elements and fields of picture elements into second groups of digital representations relating to one of frames of picture elements and fields of picture element Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3) and Fig. 6 (as described at col. 19:1-18); and (c) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19).	picture elements and fields of picture elements into second groups of digital representations relating to one of frames of picture elements and fields of picture elements Structure: switching element 13a (as shown in Fig. 1A and as described at col. 13, lines 19-22) including the inter/intra type coding signal that controls this element; block adaptive frame/field coding analyzer 14 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 5, and as described at col. 6, lines 22 – 58, col. 7, lines 38-40, and col. 18, lines 11-68) including the digital video input signal or the estimate error signal input to this element, and the coding type signal output by this element;		picture elements and fields of picture elements into second groups of digital representations relating to one of frames of picture elements and fields of picture elements Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3) and Fig. 6 (as described at col. 19:1-18); and (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19).

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col. 19, lines 1-18), including the coding type signal and the digital video input signal or the estimate error signal input to this element, and the blocks output by this element; and discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30), including the blocks input to this element and the transform coefficients output by this element; including all interconnections between these elements		

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		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image
		consistent with claims 23, 24 and 31 **fields:** subsets of a frame consisting of groups of contiguous picture elements	*consistent with claims 2, 23, 24 and 31* **fields:** a set of odd horizontal scan lines and a set of even horizontal scan lines that together make up a complete picture from a video sequence		*consistent with claims 23, 24 and 31* **fields:** subsets of a frame consisting of groups of contiguous picture elements
		consistent with claims 1, 23, 24, 25 and 31 **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require	*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** a number of macroblocks, submacroblocks, and blocks of picture elements, for example, 16x16		*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require

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		construction.	macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		construction.
	consistent with claims 13, 15 and 23-26 **selectively:** in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 23-26* ***selectively:*** *MPT is collaterally estopped from relitigating this term.* in a manner that selects from among two or more options	in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options
25. The apparatus of claim 24, in which the means for **selectively** transforming comprises a **means for transforming groups of digital representations in the input video signal into groups of frequency coefficients related to the input video signal**	Function: transforming groups of digital representations in the input video signal into groups of frequency coefficients related to the input video signal	Function: transforming groups of digital representations in the input video signal into groups of frequency coefficients related to the input video signal Structure: discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19)	Function: transforming groups of digital representations in the input video signal into groups of frequency coefficients related to the input video signal Structure: discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7,		Function: transforming groups of digital representations in the input video signal into groups of frequency coefficients related to the input video signal Structure: discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19)

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			lines 27-30) including the blocks input to this element and the transform coefficients output by this element		
		consistent with claims 1, 23, 24, 25 and 31 **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.	*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** a number of macroblocks, submacroblocks, and blocks of picture elements, for example, 16x16 macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
	consistent with claims 13, 15 and 23-26 **selectively:** in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options However, plaintiff disputes	*consistent with claims 13, 15 and 23-26* ***selectively:*** *MPT is collaterally estopped from relitigating this term.* in a manner that selects from among two or more	in a manner that selects from among two or more options	*consistent with claims 13, 15 and 23-26* **selectively:** in a manner that selects from among two or more options

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		that it is collaterally estopped.	options		
26. The apparatus of claim 24, in which the means for **selectively** transforming comprises a means for **adaptively performing a discrete cosine transform of the input video signal in response to the frame/field encoding type signal.**		Function: adaptively performing a discrete cosine transform of the input video signal Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 7:5-col. 7:10, col. 5:66-6:3) and Fig. 6 (as described at col. 19:1-18); and (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19)	Function: adaptively performing a discrete cosine transform of the input video signal in response to the frame/field encoding type signal Structure: block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 to col. 7, line 14 and col. 19, lines 1-18) including the coding type signal and the digital video input signal or the estimate error signal input to this element, and the blocks output by this element; and discrete cosine transform circuit 16 (as shown in Fig. 1Aand as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30), including the blocks input to this element and the		Function: adaptively performing a discrete cosine transform of the input video signal in response to the frame/field encoding type signal Structure: (a) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 7:5-col. 7:10, col. 5:66-6:3) and Fig. 6 (as described at col. 19:1-18); and (b) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:19)

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			transform coefficients output by this element; including all interconnections between these elements		
		consistent with claims 13, 26 and 32 **adaptively:** Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. The term should be construed as "capable of changing in response to a condition"	*consistent with claims 26 and 32* **adaptively:** *No construction is necessary. This term should be given its ordinary meaning.*		*consistent with claims 26 and 32* **adaptively:** No construction is necessary. This term should be given its ordinary meaning.
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image

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		frame/field coding type: *consistent with claims 1, 14, 17, 23 and 26* frame or field coding	**frame/field coding type:** *consistent with claims 1, 14, 17, 23 and 26* frame coding or interlaced field coding		*consistent with claims 1, 14, 17, 23 and 26* **frame/field coding type:** frame or field coding
27.The apparatus of claim 24, in which the predetermined characteristic comprises **a correlation between predetermined portions of the digital video input signal**		This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.	a vertical correlation between successive horizontal lines of a frame macroblock and a vertical correlation between evenly numbered horizontal lines and a vertical correlation between oddly numbered horizontal lines in corresponding field submacroblocks		This term should be given its plain meaning to one of skill in the art, and therefore does not require construction.
28. The apparatus of claim 24, in which the encoding means comprises a **means for performing motion compensation**	Function: performing motion compensation	Function: performing motion compensation Structure: (a) summing element 11 (as shown in Fig. 1 and as described at col. 6:6-22); (b) prediction selector 38B (as shown in Fig. 1 and as described at col. 10:23-48,	Function: performing motion compensation Structure: motion estimation circuit 37 (as shown in Fig. 1B and as described at col. 10, lines 11-18, col. 12, lines 10-16, and col. 12, lines 37-42) including the digital video input signal, signals relating to the contents of		Function: performing motion compensation Structure: (a) summing element 11 (as shown in Fig. 1 and as described at col. 6:6-22); (b) prediction selector 38B (as shown in Fig. 1 and as described at col. 10:23-48,

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		col. 12:10-12:36) and i. Fig. 3 (as described at col. 15:47-col. 16:27, including previous picture store 36c) or ii. Fig. 4 (as described at col. 16:28-col. 18:10, including previous picture store 36c and next picture store 36a), or iii. Fig. 3 and Fig. 4 (as described at col. 15:47-18:10, including previous picture store 36c and next picture store 36a).	the stores 36a and 36c, and the picture type signal input to this element, and the motion vectors output by this element; estimation circuit 38 (as shown in Fig. 1B and its internal circuitry as shown in Figs. 3, 4A, and 4B, and as described at col. 10, line 14 – col. 12, line 36, and col. 15 line 47 to col. 18 line 10) including the motion vectors, picture type signal, and contents of the next picture store 36a and the previous picture store 36c, input to this element, and the motion compensation type signal and estimate of the video input signal output by this element; and next picture store 36a and previous picture store 36c (as shown in Figs. 1B, 3, 4A, and 4B, and as described at col. 9, line 68		col. 12:10-12:36) and i. Fig. 3 (as described at col. 15:47-col. 16:27, including previous picture store 36c) or ii. Fig. 4 (as described at col. 16:28-col. 18:10, including previous picture store 36c and next picture store 36a), or iii. Fig. 3 and Fig. 4 (as described at col. 15:47-18:10, including previous picture store 36c and next picture store 36a).

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			– col. 10, line 10, col. 15, lines 55-57, col. 16, lines 35-37, and col. 16, lines 40-42) including the frames of video data input to and output by these elements; including all interconnections between these elements		
29. The apparatus of claim 24, in which the encoding means comprises a **means for quantizing the digital video input signal**	Function: quantizing the digital video input signal	Function: quantizing the digital video input signal Structure: visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3), or Fig. 13 (as described at col. 24:61-col. 25:8)	Function: quantizing the digital video input signal Structure: visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 13, and as described at col. 7, line 27 - col. 8, line 5, col. 9, lines 19-22, col. 9, lines 34-37, col. 13, lines 22-25, and col. 24, line 61 to col. 25, line 8) including the transform coefficients, coding type signal, picture type signal, digital input signal, estimate error signal, inter/intra type signal, and fullness signal input to this element, and		Function: quantizing the digital video input signal Structure: visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3), or Fig. 13 (as described at col. 24:61-col. 25:8)

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			the quantized transform coefficients and quantization parameter output by this element		
30. The apparatus of claim 24, in which the encoding means comprises a **means for performing variable word length encoding**	Function: performing variable word length encoding	Function: performing variable word length encoding Structure: encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 8:62-68, col. 9:14-22)	Function: performing variable word length encoding Structure: variable word length choice analyzer 23a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 10, configured to use the tables shown in Figs. 1G-1N, and as described at col. 9, lines 3-13) including the ordered quantized transform coefficients and picture type signal input to this element, and the variable word length table select signal output by this element; scan selector circuit 23 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 14, and as		Function: performing variable word length encoding Structure: encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 8:62-68, col. 9:14-22)

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			described at col. 8, line 36 – col. 9, line 2 and col. 25, lines 9-25) including the quantized transform coefficients and coding type signal input to this element, and the ordered quantized transform coefficients output by this element; and variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the ordered quantized transform coefficients, block class signal, quantization parameter, picture type signal, transform coefficients, differential dc coefficient prediction, variable word length table select signal		

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			and differential motion vectors input to this element, and the coded transform coefficients output by this element; including all interconnections between these elements		
31. An apparatus for encoding digital video signals, comprising: a **means for receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame comprising a plurality of fields**	Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame comprising a plurality of fields Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)		Function: receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame comprising a plurality of fields Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)
		consistent with claims 23, 24 and 31 **fields:** subsets of a frame consisting of groups of contiguous picture elements	*consistent with claims 2, 23, 24 and 31* **fields:** a set of odd horizontal scan lines and a set of even horizontal scan lines that together make up a		*consistent with claims 23, 24 and 31* **fields:** subsets of a frame consisting of groups of contiguous picture elements

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			complete picture from a video sequence		
a **means for performing adaptive motion compensated encoding of groups of digital representations in the input signal relating to one of frames and fields in the input signal**; and,	Function: performing adaptive motion compensated encoding of groups of digital representations in the input signal relating to one of frames and fields in the input signal	Function: performing adaptive motion compensated encoding of groups of digital representations in the input signal relating to one of frames and fields in the input signal Structure (a) prediction selector 38B (as shown in Fig. 1 and as described at col. 10:23-48, col. 12:10-12:36) and i. Fig. 3 (as described at col. 15:47-col. 16:27, including previous picture store 36c) or ii. Fig. 4 (as described at col. 16:28-col. 18:10, including previous picture store 36c and next picture store 36a), or iii. Fig.3 and Fig. 4 (as described at col. 15:47-	Function: performing adaptive motion compensated encoding of groups of digital representations in the input signal relating to one of frames and fields in the input signal Structure: motion vector prediction circuit 41 (as shown in Fig. 1A and the circuitry within circuit 41 as shown and described in Figs. 15, 16A, and 16B, and the description of circuit 41 and its internal circuitry set forth in col. 12 lines 39-49 and in col. 25 line 26 - col. 27 line 34); variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36 – col. 9 line 34, col. 12		Function: performing adaptive motion compensated encoding of groups of digital representations in the input signal relating to one of frames and fields in the input signal Structure (a) prediction selector 38B (as shown in Fig. 1 and as described at col. 10:23-48, col. 12:10-12:36) and i. Fig. 3 (as described at col. 15:47-col. 16:27, including previous picture store 36c) or ii. Fig. 4 (as described at col. 16:28-col. 18:10, including previous picture store 36c and next picture store 36a), or iii. Fig.3 and Fig. 4 (as described at col. 15:47-

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		18:10, including previous picture store 36c and next picture store 36a); (b) summing element 11 (as shown in Fig. 1 and as described at col. 6:6-22); (c) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3), and Fig. 6 (as described at col. 19:1-18); (d) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:10); and (e) visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66-6:3) or Fig. 13 (as described at col. 24:61-col. 25:8).	lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the ordered quantized transform coefficients, block class signal, quantization parameter, the picture type signal, and differential motion vectors input to this element, and the coded transform coefficients output by this element; and summing element 42 (as shown in Fig. 1A and as described at col. 12 lines 50-53) including the motion vector estimate and the motion vector signal input to this element, and the differential motion vector signal output by this element; including all interconnections between these elements		18:10, including previous picture store 36c and next picture store 36a); (b) summing element 11 (as shown in Fig. 1 and as described at col. 6:6-22); (c) block formatting circuit 15A (as shown in Fig. 1 and as described at col. 6:59-66, col. 5:66-6:3), and Fig. 6 (as described at col. 19:1-18); (d) discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-col. 7:10); and (e) visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1 and as described at col. 7:27-45, col. 5:66- 6:3) or Fig. 13 (as described at col. 24:61-col. 25:8).
		consistent with claims 14,	*consistent with claims 14,*		*consistent with claims 14,*

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CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		15, 31 and 33 **adaptive:** Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. This term should be construed consistent with the term "adaptively," defined above, as "capable of changing in response to a condition"	*31 and 33* **adaptive*:*** *No construction is necessary. This term should be given its ordinary meaning.*		*31 and 33* **adaptive*:*** No construction is necessary. This term should be given its ordinary meaning
		consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31 **frame:** a complete set of digital representations for an image	*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete picture from a video sequence		*consistent with claims 1, 2, 13, 15, 23, 24, 26 and 31* **frame:** a complete set of digital representations for an image
		consistent with claims 1, 23, 24, 25 and 31 **groups of digital representations:** This term should be given	*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** a number of macroblocks,		*consistent with claims 1, 23, 24, 25 and 31* **groups of digital representations:** This term should be given

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
		its plain meaning to one of skill in the art, and therefore does not require construction.	submacroblocks, and blocks of picture elements, for example, 16x16 macroblocks of picture elements, 16x8 subblocks of picture elements, and 8x8 blocks of picture elements		its plain meaning to one of skill in the art, and therefore does not require construction.
a **means responsive to the video input signal prior to encoding for producing a motion compensation type signal for controlling the adaptive motion compensated encoding means**		Function: producing a motion compensation type signal Structure: motion compensated prediction analyzer 38A (as shown in Fig. 1 and as described at col. 12:25-30).	Function: producing a motion compensation type signal for controlling the adaptive motion compensated encoding means Structure: motion estimation circuit 37 (as shown in Fig. 1B and as described at col. 10, lines 11-18, col. 12, lines 10-16, and col. 12, lines 37-42) including the digital video input signal, signals relating to the contents of the stores 36a and 36c, and the picture type signal input to this element, and the motion vectors output by this element;		Function: producing a motion compensation type signal for controlling the adaptive motion compensated encoding means Structure: motion compensated prediction analyzer 38A (as shown in Fig. 1 and as described at col. 12:25-30). [The Court requests the parties to discuss the motion estimation circuit 37 and the next picture store 36a at the hearing.]

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			estimation circuit 38 (as shown in Fig. 1B and its internal circuitry as shown in Figs. 3, 4A, and 4B, and as described at col. 10, line 14 – col. 12, line 36, and col. 15 line 47 - col. 18 line 10) including the motion vectors, picture type signal, and contents of the next picture store 36a and the previous picture store 36c, input to this element, and the motion compensation type signal and estimate of the video input signal output by this element; and next picture store 36a and previous picture store 36c (as shown in Figs. 1B, 3, 4A, and 4B, and as described at col. 9, line 68 – col. 10, line 10, col. 15, lines 55-57, col. 16, lines 35-37, and col. 16, lines 40-42) including the frames of video data input to and output by these		

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			elements; including all interconnections between these elements		
		consistent with claims 13, 15 and 31 **motion compensation type signal:** a signal that identifies one of two or more available modes of motion compensation to be used in motion compensation However, plaintiff disputes that it is collaterally estopped.	*consistent with claims 13, 15 and 31* **motion compensation type signal:** *MPT is collaterally estopped from relitigating this term.* a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal	a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal	*consistent with claims 13, 15 and 31* **motion compensation type signal:** a signal that identifies one of two or more available modes of motion compensation to be used in motion compensated decoding of a video signal
32. a **means for receiving digital video input signals**	Function: receiving digital video input signals Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving a digital video input signal Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)	Function: receiving digital video input signals Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)		Function: receiving digital video input signals Structure: input line 10 (as shown in Fig. 1 and described at col. 3:61-65)
a **means for performing variable word length encoding adaptively in response to the video input signals**		Function: performing variable word length encoding adaptively Structure:	Function: performing variable word length encoding adaptively in response to the video input signals		Function: performing variable word length encoding adaptively in response to the video input signals.

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		a) variable word length choice analyzer 23A (as shown in Fig. 1 and described at col. 9:3-8 and as shown in Figure 10 and as described at col. 21:50-23:23), and encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30); *see also* col. 4:65-68; or b) encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30) and i. scan selector 23 (as described at col. 8:36-9:8); or ii. Fig. 14 (as described at col. 25:9-25)	Structure: block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col. 19, lines 1-18) including the coding type signal and the digital video input signal or the estimate error signal input to this element, and the blocks output by this element; discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30) including the blocks input to this element and the transform coefficients output by this element; visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 13, and as		Structure: a) variable word length choice analyzer 23A (as shown in Fig. 1 and described at col. 9:3-8 and as shown in Figure 10 and as described at col. 21:50-23:23), and encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30); *see also* col. 4:65-68; or b) encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30) and i. scan selector 23 (as described at col. 8:36- 9:8); or ii. Fig. 14 (as described at col. 25:9-25) [The Court requests the parties to discuss the visibility matrix and perceptual quantizer 19,

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			described at col. 7, line 27 - col. 8, line 5, col. 9, lines 19-22, col. 9, lines 34-37, col. 13, lines 22-25, and col. 24, line 61 - col. 25, line 8) including the transform coefficients, coding type signal, picture type signal, digital input signal, estimate error signal, inter/intra type signal, and fullness signal input to this element, and the quantized transform coefficients and quantization parameter output by this element; variable word length choice analyzer 23a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 10, configured to use the tables shown in Figs. 1G-1N, and as described at col. 9, lines 3-13) including the ordered quantized transform coefficients and picture type signal input to this		variable word length choice analyzer 23a, and variable word length and fixed word length encoder and multiplexer 24 at the hearing.]

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			element, and the variable word length table select signal output by this element; scan selector circuit 23 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 14, and as described at col. 8, line 36 – col. 9, line 2 and col. 25, lines 9-25) including the quantized transform coefficients and coding type signal input to this element, and the ordered quantized transform coefficients output by this element; and variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the		

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			ordered quantized transform coefficients, block class signal, quantization parameter, picture type signal, transform coefficients, differential dc coefficient prediction, variable word length table select signal and differential motion vectors input to this element, and the coded transform coefficients output by this element; including all interconnections between these elements		
		consistent with claims 13, 26 and 32 **adaptively:** Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. The term should be construed as "capable of changing in response to a condition"	*consistent with claims 26 and 32* **adaptively*:*** *No construction is necessary. This term should be given its ordinary meaning.*		*consistent with claims 26 and 32* **adaptively*:*** No construction is necessary. This term should be given its ordinary meaning.

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33. The apparatus of claim 32, further comprising: a **means of transforming the digital video input signals into transform coefficients**;	Function: transforming the digital video input signals into transform coefficients	Function: transforming the digital video input signals into transform coefficients Structure: discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-7:30)	Function: transforming the digital video input signals into transform coefficients Structure: block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col. 19, lines 1-18), including the coding type signal and the digital video input signal or the estimate error signal input to this element and the blocks output by this element; and discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30), including the blocks input to this element and the transform coefficients output by this element; including the interconnection between these elements		Function: transforming the digital video input signals into transform coefficients Structure: discrete cosine transform circuit 16 (as shown in Fig. 1 and as described at col. 7:5-7:30) [The Court requests the parties to discuss the block formatting circuit 15a at the hearing.]

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the **encoding means being responsive to the transform coefficients for performing adaptive variable word length coding**		Function: performing adaptive variable word length coding Structure: a) variable word length choice analyzer 23A (as shown in Fig. 1 and described at col. 9:3-8 and as shown in Figure 10 and as described at col. 21:50- 23:23), and encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30); *see also* col. 4:65-68; or b) encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30) and i. scan selector 23 (as described at col. 8:36- 9:8); or ii. Fig. 14 (as described at col. 25:9-25)	The proper term for construction is: "**a means for performing variable world length encoding adaptively in response to the video input signals**" … "**the encoding means being responsive to the transform coefficients for performing adaptive variable word length encoding**" Function: performing variable word length encoding adaptively in response to the video input signals and the transform coefficients Structure: block formatting circuit 15a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 6, and as described at col. 6, line 59 - col. 7, line 14 and col.		Function: performing adaptive variable word length coding Structure: a) variable word length choice analyzer 23A (as shown in Fig. 1 and described at col. 9:3-8 and as shown in Figure 10 and as described at col. 21:50- 23:23), and encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30); see also col. 4:65-68; or b) encoder and multiplexer 24 (as shown in Fig. 1 and as described at col. 9:8-30) and i. scan selector 23 (as described at col. 8:36- 9:8); or ii. Fig. 14 (as described at col. 25:9-25) [The Court requests the

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			19, lines 1-18) including the coding type signal and the digital video input signal or the estimate error signal input to this element, and the blocks output by this element; discrete cosine transform circuit 16 (as shown in Fig. 1A and as described at col. 6, line 62 – col. 7, line 19 and col. 7, lines 27-30) including the blocks input to this element and the transform coefficients output by this element; visibility matrix selector and perceptual quantizer 19 (as shown in Fig. 1A and its internal circuitry as shown in Fig. 13, and as described at col. 7, line 27 - col. 8, line 5, col. 9, lines 19-22, col. 9, lines 34-37, col. 13, lines 22-25, and col. 24, line 61 - col. 25, line 8) including the transform coefficients,		parties to discuss the block formatting circuit 15a, the visibility matrix selector and perceptual quantizer 19, the variable word length choice analyzer 23a, and the variable word length and fixed word length encoder and multiplexer 24.]

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			coding type signal, picture type signal, digital input signal, estimate error signal, inter/intra type signal, and fullness signal input to this element, and the quantized transform coefficients and quantization parameter output by this element; variable word length choice analyzer 23a (as shown in Fig. 1A and its internal circuitry as shown in Fig. 10, configured to use the tables shown in Figs. 1G- 1N, and as described at col. 9, lines 3-13) including the ordered quantized transform coefficients and picture type signal input to this element, and the variable word length table select signal output by this element; scan selector circuit 23 (as shown in Fig. 1A and its		

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			internal circuitry as shown in Fig. 14, and as described at col. 8, line 36 – col. 9, line 2 and col. 25, lines 9-25) including the quantized transform coefficients and coding type signal input to this element, and the ordered quantized transform coefficients output by this element; and variable word length and fixed word length encoder and multiplexer 24 (as shown in Fig. 1A and as described at col. 8, line 36 – col. 9 line 34, col. 12 lines 54-56, col. 12, lines 60-64, col. 13, lines 26-28, and col. 13, line 63 – col. 14, line 1) including the ordered quantized transform coefficients, block class signal, quantization parameter, picture type signal, transform coefficients, differential dc coefficient		

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Case No. 09-cv-0278 H (CAB)

CLAIM TERM	AGREED PROPOSED CONSTRUCTION	PLAINTIFF'S PRELIMINARY CONSTRUCTION	DEFENDANTS' PRELIMINARY CONSTRUCTION	COURT'S PREVIOUS CONSTRUCTION	COURT'S CONSTRUCTION
			prediction, variable word length table select signal and differential motion vectors input to this element, and the coded transform coefficients output by this element; including all interconnections between these elements		
		consistent with claims 14, 15, 31 and 33 **adaptive:** Plaintiff disputes that it is collaterally estopped from offering a proposed construction for this term. This term should be construed consistent with the term "adaptively," defined above, as "capable of changing in response to a condition"	*consistent with claims 14, 31 and 33* **adaptive:** *No construction is necessary. This term should be given its ordinary meaning.*		*consistent with claims 14, 31 and 33* **adaptive:** No construction is necessary. This term should be given its ordinary meaning.

[1] As amended by the Certificate of Correction.