IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

U.S. PHILIPS CORPORATION, Plaintiff, EASTMAN KODAK COMPANY, Defendant.	)	Civil Action No. 06-00251-GMS

EASTMAN KODAK COMPANY'S ANSWERING CLAIM CONSTRUCTION BRIEF

Francis DiGiovanni (#3189)
Kristen Healey Cramer (#4512)
CONNOLLY BOVE LODGE & HUTZ LLP
The Nemours Building
1007 N. Orange Street
Wilmington, DE 19899
Phone (302) 658-9141
e-mail: fdigiovanni@cblh.com

John Allcock
Sean C. Cunningham
Tim Lohse
John D. Kinton
T. Jesse Hindman
DLA PIPER US LLP
401 B Street, Suite 1700
San Diego, CA 92101-4297
Tel: 619.699.2700
Fax: 619.699.2701
Attorneys for Defendant/Counterclaimant
Eastman Kodak Company

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Eastman Kodak Company ("Kodak") submits this answering claim construction brief in response to U.S. Philips Corporation's Opening *Markman* Brief.

I. INTRODUCTION

Philips' opening *Markman* brief highlights why Kodak's positions on claim construction—and its views about U.S. Patent No. 4,901,075 ("'075 Patent") in general—are correct. First, Philips' brief demonstrates that the '075 patent and the incorporated Chen Article are directed at coding the same type of signals—video signals. Second, Philips correctly identifies the point of novelty of the '075 patent's purported invention as observing a statistical dependence between two types of symbols in a video signal. Third, Philips' brief relies heavily on the preferred embodiment to support many of its constructions, but fails to recognize that the claims (and Kodak's proposed constructions) are directed to the aspects of the preferred embodiment that were not disclaimed during prosecution. Therefore, for the reasons discussed in Kodak's opening brief and below, the Court should adopt Kodak's proposed constructions.

II. THE COURT SHOULD ADOPT KODAK'S PROPOSED CONSTRUCTIONS OF THE DISPUTED CLAIM TERMS.

A. "Coefficient," "Zero Coefficient" and "Non-Zero Coefficient" (All Claims).[1]

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"coefficient"	a whole number	a multiplication factor that results from transform coding
"zero coefficient"	a whole number whose value is zero	a coefficient whose value is zero or approximately zero
"non-zero coefficient"	a whole number whose value is greater than zero	a coefficient whose possible magnitudes proceed through the natural numbers without the zero

Philips' proposed construction of "coefficient," "zero coefficient" and "non-zero coefficient" ignores the intrinsic evidence. These are not complicated terms, as Philips suggests,

nor is there any need to resort to extrinsic evidence, as Philips does. There is ample intrinsic evidence to determine the plain and ordinary meaning of these terms, and Kodak's proposed constructions are consistent with this intrinsic evidence.

First, the claim language itself demonstrates that the claimed coefficients are whole numbers, not fractions. Although, as Philips notes, the patent specification describes pre-quantized coefficients that include a fractional component, (*See* D.I. 107 at 14-15) these pre-quantized coefficients are not claimed. The parties agree that quantization converts numbers to whole numbers,[2] so the issue is whether the claim term "coefficient" refers to pre-quantization or post-quantization coefficients. As the preamble of claim 3 confirms, "coefficient," as used in the claims, refers to post-quantization (i.e., whole) numbers:

> In a method of coding a signal comprising a sequence of coefficients which results after a blockwise transform of pixels of a video signal with subsequent quantization . . . (Ex. A at 7:41-44, emphasis added.)[3]

The logic is simple. Claims 3 and 8 are directed to post-quantization coefficients. The parties agree that the process of quantization rounds off numbers so the resulting coefficients are whole numbers. (*See* D.I. 107 at 5.) Because the claimed coefficients have been rounded off, they cannot be fractions. Philips' position that "coefficient" may include fractions is contrary to the surrounding claim language. *See ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) ("the surrounding words of the claim also must be considered in determining the ordinary and customary meaning").

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[1] For the Court's convenience, Kodak's responses to Philips' arguments appear in the order they were presented in Philips' opening brief.

[2] The parties agree that quantization means "a process that substitutes a single whole number for a range of single values." (*See* D.I. 94, Joint Claim Construction Statement at 3.)

[3] Exhibits A, B and E cited herein are attached to the Declaration of Nicole Wyll (D.I. 106) and were filed with Kodak's Opening Claim Construction Brief (D.I. 105).

Second, because "coefficient" is a whole number, "zero coefficient" must be a whole number whose value is zero. Philips' contrary argument that "zero coefficient" can be "zero or approximately zero" is based on a single sentence in the specification pointing out that pre-quantized zero coefficients may be zero or approximately zero. (*See* Ex. A at 2:30-33.) But again, the claims refer to post-quantized, not pre-quantized, zero coefficients. Philips' argument again ignores the plain language of the claims.

Third, there is no support in the patent that a coefficient must include a "multiplication factor." Not surprisingly, Philips' primary support for attempting to read this additional limitation into the claims is not the patent, but rather non-contemporaneous dictionary definitions. Neither the claims nor the patent specification support this limitation—rather, the claimed "coefficients" are the result of a mathematical process, not part of that process. (Ex. A, '075 Patent, claim 3 ["coefficients which result after a blockwise transformation . . . with subsequent quantization"]; claim 8 ["transforming said signal into a sequence comprising . . . coefficients"].)

The specification also demonstrates that the claimed coefficients result from the transform process; nowhere does the specification even mention "multiplication factors." (Ex. A at 7:41-44, 8:10-12.) Moreover, it is black-letter law that dictionary definitions cannot be used to contradict the intrinsic evidence. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1322-23 (Fed. Cir. 2005). And because the dictionaries Philips relies on were published more than ten years after the filing of the patent, they should be afforded no weight at all. *See id.* at 1313; *Lucent Techs., Inc. v. Extreme Networks, Inc.*, 367 F. Supp. 2d 649, 668 (D. Del. 2005).

Fourth, there is no support for Philips' attempt to exclude binary coefficients from the construction of "non-zero coefficient." Philips wants to exclude binary coefficients—those

having the values 0 and 1—to try to avoid prior art that discloses coding runs of zeros and the non-zero coefficient 1. But Phillips' proposed construction is contrary to the plain meaning of "non-zero coefficient," which simply requires a whole number that does not equal zero. One is not zero, so there is no basis to exclude binary values. Further, the specification demonstrates that a non-zero coefficient can have a value of 1: "If the overall coefficient block comprises, for example 63 zeros with subsequent coefficients of the value 1, it is split up into only one event, namely (63, 1)." (Ex. A at 5:19-21, emphasis added.) Because Philips cannot rewrite the claims to exclude binary coefficients, the Court should adopt Kodak's construction.

B. "Signal" (All Claims) and "Video Signal" (Claims 3, 4, 7).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"video signal"	a sequence of values comprised of sequential and interdependent moving images	a sequence or array of values that represents visual information (e.g., an image)
"signal"	a sequence of values comprised of sequential and interdependent moving images	a sequence or array of values that represents information

To try to support its construction of "video signal" and "signal," Philips repeatedly misconstrues or ignores the intrinsic evidence. For instance, referring to the Chen Article, Philips claims that "the only examples of images that are coded in Chen & Pratt are still images. . . ." (Philips' Br. at 20, emphasis in original.) But in fact the '075 patent confirms that the Chen Article "describes a coding process of video signals for transmitting video pictures . . . ." (Ex. A, 1:11-16, emphasis added.) Indeed, the only transmission of video pictures described in the Chen Article is the transmission of moving images, not still images. (Ex. B at 225, 229.) Philips' contrary contention is plain wrong. Rather, the intrinsic evidence demonstrates that: (1) the '075 patent teaches coding of video signals; (2) the alleged point of novelty is the recognition of a statistical correlation among certain frequently occurring events

that arise only when coding video signals; and (3) the term "video" used in the intrinsic evidence relates to moving images, not still images.

1. The '075 Patent Discloses Coding of Video Signals Only.

First, the '075 patent describes coding one type of signal, a video signal. The patent first describes the prior art Chen method of encoding video signals. (Ex. A at 1:11-57.) The patent then describes the frequency of zero coefficients and non-zero coefficients for a video signal in Figure 1. (*Id.* at 2:50-52.) Next, the patent discusses a statistical correlation between the frequency of certain occurrences for video signals, and claims an improvement over the Chen method for coding video signals. (*Id.* at 3:1-25.) The patent does not distinguish its use of "video signal" from the coding method of "video signals" in the Chen Article. (*See id.* at 1:5-65.) And the patent never differentiates "signal" from "video signal." Because a "video signal" is the only type of signal disclosed as being encoded, a person of ordinary skill in the art would have understood the term "signal" in the patent to be a "video signal."

2. Philips Admits the Purported Invention Was the Recognition of a Statistical Property of Video Images.

Second, the parties agree that the claimed point of novelty is, if anything, a "statistical property of images" that occurs only in video images. (D.I. 107 at 1, 8.) As Philips puts it:

> The patent illustrates this key inventive recognition in Figure 1. Figure 1 is a chart that illustrates Mr. Vogel's findings, based on his tests, as to the relationship between the length of the run of zero coefficients and the magnitude of the non-zero coefficient that follows the run[.]

(D.I. 107 at 8.) But Philips ignores that Figure 1—supposedly the "key inventive recognition" of the patent—describes the coding of only video signals: "Fig. 1 shows the frequency distribution of the above-mentioned events in the case of a cosine-transformed and subsequently quantized video signal." (Ex. A at 2:50-52, emphasis added.) By Philips' own admission, the alleged

invention was the observation of the statistical properties of the video signal of Figure 1. Nothing in the intrinsic evidence suggests that the "events" described in Figure 1 apply to any other type of signals.

Simply put, the only coding method the patent teaches is the coding of video signals. A patent must fully enable and describe its claimed invention "in such full, clear, concise, and exact terms as to enable any person skilled in the art...to make and use the same." 35 U.S.C. § 112 (2007). Because the patentee only disclosed and enabled the coding of video signals in the specification, and failed to provide any teaching about other types of signals, the claim terms "video signal" and "signal" must be construed as limited to "video signal." *See Wang Labs, Inc. v. America Online, Inc.*, 197 F.3d 1377, 1382-83 (Fed. Cir. 1999).

In *Wang Labs*, the dispute was whether the claim term "frame" encompassed both character-based protocols and bit-mapped protocols. *Wang Labs,* 197 F.3d at 1380-81. The court found that "[t]he only system that is described and enabled in the '669 specification and drawings uses a character-based protocol." *Id.* at 1382. The court therefore limited the term "frame" to character-based protocols, concluding that "the references to other known protocols do not describe them as included in the applicant's invention, and [] the specification would not be so understood by a person skilled in the field of the invention." *Id.*

Here, the patent describes and enables the coding of video signals only. Philips concedes that a "key statistical property of images"—described for video signals only—is the purported of novelty of the patent. There is simply no enabling disclosure for the coding of any other type of signal. In light of the patent's limited disclosure, "signal" and "video signal" should be limited to coding of video signals.

3. "Video" Means Moving Images, Not Still Images.

Third, one of ordinary skill in the art at the time of the patent (circa 1986) would have understood that "video" referred to moving images. Because the patent does not define "video" except by reference to the Chen Article, the Court must look to the Chen Article to determine this ordinary meaning. As the Abstract of that article makes clear, it was directed to the coding of moving images:

> An efficient single-pass adaptive bandwidth compression technique using the discrete cosine transform is described. . . . Excellent results are demonstrated for coding of color images at 0.4 bits/pixel corresponding to real-time color television transmission over a 1.5 Mbit/s channel.

(Ex. B at 225; *see also id.* at 229 ["The scene adaptive coder described herein . . . is well suited for intraframe coding of moving images"], emphasis added.)

Philips incorrectly asserts that the Chen Article's method was not intended for coding of moving images by citing the first few lines of the article as proof that the Chen encoding method applies to still images and not moving images. (D.I. 107 at 31.) On the contrary, that portion of the Chen Article describes general techniques that were known in the art at the time of the article's publication. (*See* Ex. B at 225.) Even a casual reading of the article demonstrates that these introductory passages are not the "Chen & Pratt . . . coding process," as Philips suggests. (D.I. 107 at 20.) Rather, the Chen Article's coding process is described in Section III, Scene Adaptive Coder. (Ex. B at 226-229.)

Philips also incorrectly asserts that the Chen Article's method can be "applied" to the coding of single images. (D.I. 107 at 19.) But the images Philips points to are expressly used for simulations. (Ex. B at 229.) A person of skill in the art would have known to use these small still images for testing purposes, because they were easier and more practical to store. Indeed, the images referenced in the Chen Article were part of a standard test set used by researchers at

that time, because there were no standardized motion video images available then. Chen's use of standard still images for simulations does not mean that "video signal" refers to something other than moving images.

Indeed, another court has already determined that Chen's work was directed to moving images, not still images. In 2006, the Northern District of California issued a claim construction ruling for United States Patent No. 4,698,672 ("the '672 patent"), which issued to Chen based on the work described in the Chen Article. The '672 patent is directed to coding of video data for television transmission, and was cited during prosecution of the '075 patent. Like Philips, the owner of the '672 patent claimed the patent covered the JPEG method for coding still images. In that case, the Court construed the terms "digital signals" and "processed signals" to apply only to video signals, not still images. (Ex. F, United States District Court for the Northern District of California, San Jose Division "Order Construing Claims of United States Patent No. 4,698,672." at 11.) Thus, one court has already determined that video signals are different from still images. Although this decision is not binding here, it is persuasive authority.

4. The Court Should Reject Philips' Extrinsic Evidence in Favor of the Intrinsic Evidence.

Fourth, the Court should reject Philips' attempt to broaden the construction of "signal" by reference to extrinsic evidence. (D.I. 107 at 18.) As discussed above, the intrinsic evidence demonstrates that "video signal" refers to moving images. Where the intrinsic evidence sets forth the scope of a claim, the Court need not look to any extrinsic evidence. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Furthermore, the textbook Philips cites was published in 2001, nearly 15 years after the patent was filed, and two of the dictionaries were published in 1997 and 2002. (D.I. 107 at 18, 20.) Non-contemporaneous extrinsic evidence has little or no value in the claim construction process. *Brookhill-Wilk 1, LLC v.*

Intuitive Surgical, Inc., 334 F.3d 1294, 1299 (Fed. Cir. 2003). Philips' third dictionary is non-technical, was published in 1985 and actually supports Kodak's construction. (D.I. 107 at 20 [describing "video" as "being, relating to, or involving images on a television screen or computer display."].) If the Court wishes to consult a dictionary, it should consult the 1984 and 1986 editions of the IEEE dictionary to find the ordinary meaning of "video." Both editions define video as "pertaining to the bandwidth and spectrum position of the signal resulting from television scanning." (Ex. G, IEEE Standard Dictionary of Elec. and Elec. Terms, 3d ed. (1984) at 1001; Ex. H, IEEE Standard Dictionary of Elec. and Elec. Terms 4th ed. (1986) at 1076.) A person of ordinary skill in the art would therefore have understood that "video" relates to moving images.

C. "Code Word" (All Claims) and "Assigning a Code Word . . ." (Claims 3, 4, 7, 8).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"code word"	a unique representation in a single code table for an event	a sequence of bits assigned to represent a particular event or events in accordance with a predefined set of rules
"assigning a code word to represent said non-zero coefficient and said run length"	selecting a unique entry in the single code table that corresponds to the event	Plain meaning.
"assigning a code word to represent said run length and said non-zero coefficient"	selecting a unique entry in the single code table that corresponds to the event	Plain meaning.

Philips criticizes Kodak's inclusion of "unique" representation and "single code table" as adding two limitations "that are nowhere found in the claims or the specification" and as a result "exclude the only preferred embodiment." (D.I. 107 at 24, 27.) Not only is Philips incorrect, it ignores the intrinsic evidence that requires both limitations. The inclusion of "unique" representation is required by the prosecution history, while the inclusion of "single code table"

recognizes the core of the alleged invention that distinguishes the patent from the Chen Article, which used two code tables. (D.I. 105. at 19, 20.) Kodak's constructions are the correct ones.

1. The Prosecution History Requires That a "Code Word" Describe a Unique Event.

The prosecution history of the '075 patent requires that "code word" refer to a unique representation of an event. Philips' claim that "the same code word can be assigned to multiple events" (D.I. 107 at 24) is, on the other hand, contrary to the clear and unambiguous statement made to the Examiner during prosecution of the '075 Patent. During prosecution, Philips distinguished its invention over the prior art by making the following statement:

> [I]n accordance with the instant invention, there is assigned only one codeword to the entire event. This codeword depends on the number of zero coefficients . . . and the value of the non-zero coefficient. Different codewords are assigned to events having the same number of zero coefficients but different values of the non-zero coefficient.

(Ex. E, '075 Prosecution History at Kodak 000134). There is only one reasonable interpretation of this statement. First, "there is assigned only one codeword to the entire event" can only mean that there is only one code word for each event. This interpretation is fully supported by the claims, each of which requires "for each of said events . . . assigning a code word[.]" Second, the statement that "[d]ifferent codewords are assigned . . ." to events having "different values of the non-zero coefficient" must mean that each event has a corresponding unique code word. Philips is bound by statements made to the Examiner to secure allowance of the patent. *See Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.*, 222 F.3d 951, 957 (Fed. Cir. 2000).

2. The Alleged Invention Is Limited to a Single Code Table.

The alleged invention of the claims is expressly limited to a single code table. Philips incorrectly asserts that "there is no suggestion in the preferred embodiment that a single code table is necessary or important to the invention." (D.I. 107 at 26.) On the contrary, a single code

table is the alleged point of novelty over the Chen Article's two-table coding method. (*See* D.I 105 at 19; Ex. A, at 1:11-57.) As the patent describes, the Chen Article discloses using two code tables: "A first table shows how the . . . coefficients different from 0 are to be coded . . . . A second table shows how the run length is to be coded." (Ex. A at 1:46-53.) The patent then describes an improvement over the Chen method, by encoding the run length of zeros together with the value of the non-zero coefficients. It calls this combination an "event." (*Id. at* 2:36-40.) The patent notes that by coding these two values together in a single two-dimensional table results in a 12 percent reduction in bit rate:

> An additional bit rate reduction of 12% is achieved when coding video signals in accordance with the above-mentioned two-dimensional coding table as compared with the coding method described in the opening paragraph.

(*Id. at* 3:13-17.) This single "two-dimensional coding table" is the only alleged point of novelty of the '075 patent. Each of the figures refers to a single code table. (Ex. A at 3:2-3 ["a two-dimensional coding table is obtained"]; Figures 3-5 [showing a single code table].) Philips cannot now disclaim the single code table to stretch its patent beyond its disclosure. Rather, where there is only one disclosed embodiment, and that embodiment discloses a significant feature of the invention, that feature is a limitation of the claims. *See Wang Labs* 197 F.3d at 1382-83. The claims should be limited to a single code table.

3. Philips' Argument Is Based on a Misconception of the Patent.

Philips' position that "[i]n the preferred embodiment the same code word can be assigned to multiple events" (D.I. 107 at 24) appears to be based on a misconception of Figures 3 through 5 of the patent. The patent states that those figures "show the exact structure of the Huffman codewords used," but does not state that those are the exact values for those code words. (Ex. A at 4:55-56.) A simple example demonstrates this point. Figure 3 includes the letter "s" as part of

the code word for many of the entries. Obviously, that "s" cannot be part of the code word, but is rather a placeholder to represent the possible values for the sign bit. (Ex. A at 4:66.) This is because a binary system that works in 0s and 1s cannot transmit an "s." A person of ordinary skill would understand that the "s" bit would be replaced with a 0 or 1 in the code word, depending on whether the value of the non-zero coefficient was positive or negative. Thus the coding table described in Figure 3 would actually have two unique code words depending on whether the sign is positive or negative. The same would be true for each event in Figures 3 through 5 that has an "s" bit. Thus, the actual code words described in Figures 3 through 5 are unique for each non-zero coefficient and each event. The patent therefore discloses a single code table with each code word uniquely identifying an event.

4. The Court Should Adopt Kodak's Construction of "Assigning a Code Word . . . ."

The parties agree that "assigning" and "represent" have plain meanings. (D.I. 107 at 26.) Philips mistakenly claims that because these two terms have a plain meaning, the entire phrase "assigning a code word . . ." has a plain meaning. (D.I. 107 at 28.) This is incorrect. Because of Philips' disclaimer of claim scope during prosecution, the term "code word" does not have a plain meaning. Philips disclaimed claim scope during prosecution by describing each "code word" as unique to each event. Philips cannot now recapture any "plain meaning" that might otherwise have existed. Accordingly, the Court should adopt Kodak's constructions.

D. "Huffman Code Word" and "Huffman Code Word is Independent ..." (Claims 4, 7).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"Huffman code word"	a variable-length code word that identifies each unique event, where the code word is shorter for more frequently occurring events and longer for less frequently occurring events, whereby no Huffman code word is the prefix of another Huffman code word	a sequence of bits assigned to represent a particular event or events in accordance with a predefined set of rules with the following characteristics: a) the code words may be of different lengths; b) no code word is a prefix of another code word; and c) the predefined set of rules strives to minimize the average code word length by exploiting the distribution of event probabilities
"Huffman codeword is independent of the sign of that non-zero coefficient"	the Huffman codeword is separate from the single bit that only provides whether the non-zero coefficient is positive or negative	Plain meaning, i.e. "a sequence of bits assigned to represent a particular event is independent of the sign of the non-zero coefficient."

Kodak agrees that portions of the parties' definitions for "Huffman code word" are substantively similar. (*See* D.I. 107 at 28.) However, there are material problems with some aspects of Philips' proposed construction.

First, Philips seeks to read into its proposed construction that its set of rules "strives to minimize the average code length." There is nothing in the specification (or elsewhere) to support the view that Huffman coding "strives" or "tries" to do anything. Rather, adding a subjective, state-of-mind element to the claims would create needless ambiguity and uncertainty. The cited evidence supports Kodak's view that Huffman coding assigns the shortest code word to the most frequently occurring event. Tellingly, Philips cites no support for the notion that the Huffman coding will "try" or "strive" to reduce the code word.

Second, Philips erroneously asserts that Kodak's construction "does not explicitly recite [a] key characteristic" that "probabilities of events are used to try to minimize the average code

word length." (*Id.* at 28.) Not true. Kodak's construction states that Huffman code words are "shorter for more frequently occurring events and longer for less frequently occurring events[.]" In contrast, Philips seeks to avoid offering a meaningful construction for one term and defines the other term so broadly that it lacks support in the intrinsic record.

E. The "Sign" Limitation (Claim 7).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"the sign is coded by a separate bit"	a single bit that only provides whether the non-zero coefficient is positive or negative	the sign can be determined solely by examining a single bit

The '075 patent includes only a short discussion of the sign bit. While describing the code table in Figures 3 through 5, the specification states that "[t]he bit s denotes the sign bit." (Ex. A at 4:66.) Because all coded values are binary (i.e., 0 or 1), the "s bit" is either 0 or 1, with one value representing a positive coefficient and the other a negative coefficient. The "s" bit therefore serves only one function—to determine whether the non-zero coefficient is positive or negative. There is no teaching in the patent that the "s" has any other role. Philips' construction would erroneously allow other bits having other functions to be the "sign bit" if somehow sign information could be extracted. (D.I. 107 at 30.) Noticeably missing from Philips' argument is any support. This is not how claim construction works, and the Court should see these statements for what they are—attorney argument attempting to fill in the holes in Philips' construction. Philips cannot now seek coverage broader than what is supported by the intrinsic record. *See On Demand Mach. Corp. v. Ingram Industries, Inc.*, 442 F.3d 1331, 1338 (Fed. Cir. 2006). The intrinsic record makes clear that the "s bit" has only one purpose, and that is to denote the sign of the non-zero coefficient. The Court should adopt Kodak's construction.

F. "Run" and "Run Length" (All Claims).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"run"	a sequence of equal value coefficients	a sequence (possibly of length zero) of successive identical particular values
"run length"	the number of equal value coefficients in a sequence	the number (which can be zero) of identical particular values in a run

The parties agree on the majority of the construction for these terms, with the sole difference being that Philips explicitly states that a "run length" may be zero. Contrary to Philips' unsupported assertions, Kodak's construction does not exclude a run length of zero. It is simply unnecessary to include this detail in the construction. Kodak's construction is fully consistent with the intrinsic evidence, is simpler, and should therefore be adopted.

G. "For Transmission at a Reduced Bit Rate" (Claim 3) and "For Transmission at a Reduced Bandwidth" (Claim 8).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"for transmission at a reduced bit rate"	Indefinite under 35 U.S.C. § 112; Otherwise, "for transmission with 12% fewer bits compared to the Chen method"	for transmission with fewer bits per pixel
"for transmission at a reduced bandwidth"	Indefinite under 35 U.S.C. § 112; Otherwise, "for transmission with 12% less bandwidth as compared to the Chen method"	for transmission with fewer bits per pixel

Philips' construction of this term is incorrect for two reasons:

First, "reduced bit rate" and "reduced bandwidth" define a fundamental feature of the alleged invention, and therefore the preambles of claims 3 and 8 are limiting. Philips argues that these terms do "no more than state an 'intended use' of a claimed invention." (D.I. 107 at 32.) But these "uses" are a fundamental aspect of the claimed coding method, because many coding methods will not result in any reduction at all, and as such, both of these terms are "necessary to give life, meaning, and vitality" to the claims. *Catalina Mktng Int'l, Inc. v. Coolsavings.com,*

Inc., 289 F.3d 801, 808 (Fed. Cir. 2002). Philips concedes that the fundamental underpinnings of the patent are the statistical dependencies between occurrences of certain coefficients, whereby encoding zero runs together with the value of the non-zero coefficient achieves a "bit rate reduction." (D.I. 107 at 8-10.) If the Court removed "for transmission at a reduced bit rate" from claim 3, it would omit the entire reason for the claimed method. The same would be true if the Court removed "for transmission at a reduced bandwidth" as a limitation from claim 8. *Catalina Mktg.*, 289 F.3d at 808. The Court should construe these phrases as limitations of the claim preambles.

Second, "reduced bit rate" and "reduced bandwidth" render the claims indefinite. Philips attempts to save these claims by arguing that these phrases both "refer to a reduction in the number of bits that are required to store a given image." (D.I. 107 at 33, emphasis in original.) Not only does Philips fail to support its statement that these mean the same thing, the patent never even refers to storage. Moreover, the claim terms "bit rate" and "bandwidth" do not mean "fewer bits per pixel." The term "bit rate," as the words imply, relates to the speed (rate) of transmitting bits. The term "bandwidth" relates to the size (width) of the frequency band used to transmit the bits. (*Id.*) Neither rate nor bandwidth are equated in the patent to "bits per pixel." These claims are indefinite.

H. "Event" (All Claims).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"event"	a run of z ero coefficients and the value of the non-zero coefficient which immediately precedes or follows that run	an occurrence of a run of zero coefficients and the non-zero coefficient which immediately precedes or follows that run, some occurrences being more likely than others

The parties agree the patentee acted as its own lexicographer in defining the term "event." The difference between the parties' constructions is the scope of that definition. Philips

seeks to add the phrase "some occurrences being more likely than others," even though that language is not part of the definition in the patent. Philips attempts to support its construction first by quoting the specification at column 2, lines 36 through 44. (D.I. 107 at 36.) But Philips' quote is taken out of context. The last sentence of Philips' quote is actually part of the next paragraph after the definition of "event":

> As used in the following description, a run of zero coefficients and the non-zero coefficient which immediately precedes or follows this run, is referred to as an event. Each non-zero coefficient which is not preceded or followed by one or more zero coefficients is also referred to as an event. According to the invention these events are to be coded.
>
> It is to be noted that some events are more likely to occur than others. . . .

(Ex. A at 2:36-44.) Only the first paragraph defines "event," and therefore the Court should adopt that definition. Claim 3 also explicitly recites an "event" as "comprising a run of said zero-coefficients having a respective run length and preceded or followed by at least one non-zero coefficient." Claim 8 uses similar language. Nowhere in either claim is there any discussion about whether "some occurrences [are] more likely than others." And because the term is clearly defined by the claims and the specification, there is no need to look to extrinsic evidence. *See Vitronics Corp.*, 90 F.3d at 1583. Notwithstanding this rule of claim construction, Philips attempts to bolster its definition by reference to a book on statistics (D.I. 107 at 36), but even that does not support its position.

I. Claim 11 Terms Requiring Construction.

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"determining whether the run length of each event exceeds a predetermined run length"	selecting an event and then determining whether the number of consecutive zero coefficients exceeds the predetermined run length	Plain meaning.

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"splitting said respective event into a plurality of sections"	dividing a single event into two or more sub-events	Plain meaning.
"assigning a code word to each section"	selecting a unique entry in the single code table for each sub-event	Plain meaning.

Rather than offering the Court guidance on the meaning of claim 11, Philips contends that the claim allegedly has a "plain meaning." But the parties themselves cannot agree on such a "plain meaning," Thus, the Court should construe these phrases. *See Maytag Corp. v. Electrolux Home Products, Inc.*, 411 F. Supp. 2d 1008, 1036-38 (N.D. Iowa 2006).

While offering no guidance, Philips claims that Kodak "improperly add[s] an entirely new limitation" to claim 11 by including the phrase "select an event" in its construction. (D.I. 107 at 38.) Not true. Philips' sole support is reference to an electrical circuit depicted in Figure 6. (*Id.* at 39.) But this circuit embodiment is irrelevant, because the circuit claims (claims 1, 2, and 12) are not at issue in this case. Rather, the controlling language of claim 11 is "determining whether the run length of each event exceeds a predetermined run length." (Ex. A at 8:35-36.) One cannot determine whether the run length of an event exceeds a predetermined run length without first selecting the event. By way of example, one cannot tell whether a run length of 0s is one, ten, or twenty coefficients in length until one determines the value of the preceding or subsequent non-zero coefficient, which defines the length of the run of zeros. The claim language therefore requires that the event first be determined so that a determination can be made as to whether the event's run length exceeds a predetermined length. That is why Kodak's construction begins with "selecting an event and then determining. . . ." This phrase conveys the temporal limitation expressly required by the claim language.

The specification also supports Kodak's proposed construction. The specification describes splitting up an event consisting of a run of 19 zeros with a subsequent non-zero

coefficient of value 7. (Ex. A at 4:3-13.) The specification describes breaking this event into three separate "sub-events," consisting of a run of 16 zeros, a run of 3 zeros, and the non-zero coefficient 7. (*Id.*) This split into "sub-events" cannot be accomplished without first forming the full event and determining the run length of the full event. Because the event must be selected first, Kodak's construction is the correct one.

J. "Transform" (Claim 3).

Term	Kodak's Proposed Construction	Philips' Proposed Construction
"transform"	a mathematical operation that converts a signal	a mathematical operation which yields an alternative representation of a sequence or array of values

The parties agree that "transform" refers to a mathematical operation performed on a signal. The parties disagree on the purpose of the mathematical operation. Kodak's construction is supported by the specification, which explains:

> First, equally large video picture sections which are represented by blocks of pixels are subjected to a Discrete Cosine Transform. [I]n this transform process, a special two-dimensional Fourier transform is used. By the transform, a new block of values (coefficients) is obtained from the original block.

(Ex. A at 1:18-23.) This passage explains that the transform converts the video signal to create "a new block of values (coefficients)." (*Id.*) Kodak's construction is consistent with this explanation. Philips, on the other hand, claims that a "transform" is a mathematical operation "which yields an alternative representation of a sequence or array of values." First, it is unclear why Philips insists on using this long and potentially confusing phrase "a sequence or array of values" instead of "signal." The patent describes performing the transform on a signal. (*Id.*) Philips admits this when it states that "[t]he parties agree that a 'transform' is a mathematical operation performed on a signal (which is just a sequence or array of values that represents information)." (D.I. 107 at 40.) Philips' construction also uses its incorrect construction of

"signal." Because "signal" is being construed separately, it is better to use the word "signal" in the construction of "transform."

Philips also claims that a transform is a mathematical operation "which yields an alternative representation" of a signal. This is contrary to the specification, which describes converting a video signal of pixels to a series of 0s and 1s. The transform does not in fact yield an alternative representation of a signal; it converts a signal. As the patent states, "[b]y the transform, a new block of values (coefficients) is obtained from the original block." (Ex. A Patent at 1:22-23.) This new block of values is the product of a mathematical operation that converts the signal. Philips' attempt to introduce further ambiguity into a technical term violates the underlying purpose of claim construction. Because Philips does not cite to any support in the intrinsic record for its overly complex, confusing, and incorrect construction, the Court should reject Philips proposed construction.

III. CONCLUSION

Kodak respectfully requests that the Court issue an Order adopting the proposed constructions presented above and in its Opening Brief.

Date: October 30, 2007

/s/ Kristen Healey Cramer

Francis DiGiovanni (#3189)
Kristen Healey Cramer (#4512)
CONNOLLY BOVE LODGE & HUTZ LLP
The Nemours Building
1007 N. Orange Street
Wilmington, DE 19899
Phone (302) 658-9141
e-mail: fdigiovanni@cblh.com

John Allcock
Sean C. Cunningham
Tim Lohse
John D. Kinton
T. Jesse Hindman
DLA PIPER US LLP
401 B Street, Suite 1700
San Diego, CA 92101-4297
Tel: 619.699.2700
Fax: 619.699.2701
Attorneys for Defendant/Counterclaimant
Eastman Kodak Company

CERTIFICATE OF SERVICE

I, Kristen H. Cramer, hereby certify that on October 30, 2007, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to registered counsel of record via e-mail.

I further certify that on October 30, 2007, I caused a copy of the foregoing document to be served on the following counsel of record by the manner so indicated:

BY E-MAIL AND HAND DELIVERY
Steven J. Balick
John G. Day
Tiffany Geyer Lydon
Ashby & Geddes
500 Delaware Avenue, 8th Floor
P.O. Box 1150
Wilmington, DE 19899

BY E-MAIL AND U.S. MAIL
Thomas W. Winland
Steven M. Anzalone
Frank A. DeCosta, III
Joyce Craig
Finnegan Henderson Farabow Garrett and Dunner LLP
901 New York Avenue, NW
Washington, DC 20001

/s/ Kristen Healey Cramer

Kristen Healey Cramer (#4512)