United States District Court,
S.D. California.

DR SYSTEMS, INC,
Plaintiff/Counterclaim-Defendant.
v.
EASTMAN KODAK COMPANY,
Defendant/Counterclaim-Plaintiff.

No. 08-CV-0669 H(BLM)

May 22, 2009.

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CLAIM CONSTRUCTION ORDER FOR UNITED STATES PATENT NUMBER 5,414,811

MARILYN L. HUFF**, District Judge.**

On January 8, 2009 and February 18, 2009, the Court conducted a claim construction hearing in this matter for U.S. Patent No. 5,414,811. Frederick Laney, Allison Goddard and Nicholas Dudziak appeared on behalf of the Plaintiff. Stephen Hankins and Paul Previde appeared on behalf of the Defendant. The parties have submitted responses to the Court's tentative claim construction. (Doc. Nos.74, 76.) After due consideration of the parties' briefing, submitted evidence, and the testimony at the hearing, the Court issues the following claim construction order.

Claim Construction-Legal Standard

The claims of a patent define the scope of the patented invention. Vitronics Corp. v. Conceptronic Inc., 90 F.3d 1576 (Fed.Cir.1996). 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 v. AWH Corp., 415 F.3d 1303, 1313 (Fed.Cir.2005).

There is a heavy presumption that claim terms carry their "ordinary and customary" meanings. CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed.Cir.2002). The "ordinary and customary" meaning is that which a person of ordinary skill in the art would understand the term to mean at the time of invention. Phillips, 415 F.3d at 1313. The person of ordinary skill in the art is "deemed to read the claim term not only in the context of the particular claim ... but in the context of the entire patent, including the specification."

Id. The use of the term in both asserted and unasserted claims may shed light on the meaning of a particular term. *Id*. at 1315. 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, 52 F.3d 967, 979 (Fed.Cir.1995). The specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." Vitronics, 90 F .3d at 1582. Although the specification is useful in determining the meaning of a term, a court must not import limitations from the specification into the claim. Phillips, 415 F.3d at 1323.

A court may also consult the prosecution history, if in evidence, during claim construction. The prosecution history "provides evidence of how the PTO and the inventor understood the patent." Phillips, 415 F.3d at 1317. However, the prosecution history is the result of a negotiation between the inventor and the patent office and therefore "often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id*.

Extrinsic evidence "is less reliable than the patent and its prosecution history in determining how to read claims." Phillips, 415 F.3d at 1318. Indeed, "intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." Vitronics, 90 F.3d at 1583. A court may only rely on extrinsic evidence in claim construction when the intrinsic evidence fails to resolve ambiguity in disputed claim terms. Id at 1583.

IT IS SO ORDERED.

CLAIM 1

(language for which the parties submitted proposed construction in bold)

A method for use with a digital image processing system including a digital database having a plurality of images digitized as image data and stored in respective image data files therein, a plurality of image memories, and an output for coupling thereto an image display device having a screen for display of images, for controlling the display of the images, the method comprising the steps of:

defining the screen to contain a plurality of sections;

selecting a plurality of image data files;

reading image data from the selected plurality of **image data files** and loading the image data into respective **image memories;**

allocating at least two image memories containing image data to at least two sections of the screen, respectively;

displaying the image data from the at least two image memories on the respective screen sections;

selecting a plurality of the images displayed on the screen sections for manipulation; and

manipulating each of the selected images responsive to a single user command so that each selected

image is manipulated in the same way at the same time.

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"defining the screen to contain a plurality of sections"	A user enters information to create a plurality of screen sections.	Construction unnecessary {Demarcating a plurality of screen sections.}	Demarcating a plurality of screen sections
			[COMMENT-DR's proposed construction limits the claim to requir e user input to divide the screen into sections. See Note 1 below.]
"selecting a plurality of image data files"	A user separately selects at least two individual image data files.	Construction unnecessary {Choosing a plurality of image data files.}	Choosing at least two image data files
			[COMMENT-DR's proposed construction limits the claim to requir e user input to select image data files. See Note 1 below.]
"image data file"	A file containing image data for only one image .	Construction unnecessary {A file containing image data.}	A file containing image data for only one image
			[COMMENT-This construction is consistent with the patent language. See Note 2 below.]
"image memories"	Two or more memory structures each being dedicated to a display device and each capable of storing only one image.	Portions of memory that store an image or images.	Memory devices each capable of storing one image [COMMENT-The Court concludes that each image memory may hold just one image. The invention depends on a "multiple memory frame store" that

			can hold more than one image. (2:40-44) Multiple memories are necessary because each image memory holds one image. (2:56-64; 3:24-27; 10:61-63)
			Dependent Claim 12 of the '811 Patent refers to image memorie s as "respective memory devices." (15:21-33) Consistent with that language, the Court concludes that each image memory is its own device. *See Phillips,* 415 F.3d at 1314 ("Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term."); *see also, Georgia-Pacific Corp. v. U.S. Gypsum Co.,* 195 F.3d 1322, 1331 (Fed.Cir.1999) ("Unless the patent otherwise provides, a claim term cannot be given a different meaning in the various claims of the same patent.").
"allocating at least two image memories containing image data to at least two sections of the screen, respectively"	A display screen that has at least two sections for presenting images and each section is assigned an image memory that holds image data for one image.	Construction unnecessary	Assigning image memories to respective screen sections
		{Associating portions of memory containing image data with sections of the screen.}	
"displaying the image data from the at least two image memories on the respective screen sections"	At least two images are presented on a display device and each image is displayed in a different section of the screen. Each image in a section represents the image data held in the image memory assigned to that screen section.	Construction unnecessary	Displaying the image data contained in the image memories on the screen sections to which the image memories are assigned

		{Displaying the image data contained in the portions of memory on the screen sections with which the memory portions are associated .}	
"selecting a plurality of the images displayed on the screen sections for manipulation"	User separately selects at least two images, which are displayed in different sections of the display screen, for manipulation.	Construction unnecessary {Selecting images displayed on the screen sections for manipulation.}	Selecting at least two images displayed on the screen sections for manipulation
			[COMMENT-The Court declines to adopt DR's proposed limitation requiring user input. See Note 1 below.]
"manipulating each of the selected images responsive to a single user command so that each selected image is manipulated in the same way at the same time"	Manipulating each of the selected images so that the same manipulation is applied to each selected image concurrently (i.e. the applied manipulations do not occur one after the other) without the need for another user command.	Construction unnecessary {Manipulating each of the selected images so that the same manipulation is applied to	Manipulating each of the selected images so that the same manipulation is applied to each selected image at the same time without need for another user command

is applied to each selected image at the same time without need for another user command.

[COMMENT-DR's proposed construction states that events taking place in rapid succession cannot occur "at the same time." See Note 3 below.]

Note 1: Requiring User Input

Several of DR's proposed constructions read into the claim language a requirement that the user input commands to guide certain steps of the process. DR points out that the patent specification frequently refers to these actions as performed by the user. *See, e.g.* U.S. Patent No. 5,414,811 col. 5 l. 13-17; col. 10 l. 56-59. However, though the "specification often describes very specific embodiments of the invention," the Federal Circuit has "repeatedly warned against confining the claims to those embodiments." Phillips v. AWH Corp., 415 F.3d 1303, 1323 (Fed.Cir.2005). "The written description part of the specification itself does not delimit the right to exclude. That is the function of the patent itself." Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed.Cir.1995) (quoted in Phillips, 415 F.3d at 1312). "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips, 415 F.3d at 1312 (quoting *Innova,* 381 F.3d at 1115. Claim 1 of the '811 patent lists several steps of a process, each beginning with a verb. '811 Patent col. Some of these actions-reading image data, displaying image data-cannot be performed by the user. The final step, however, explicitly mentions a user command. These facts suggest that, where user action is required, the patent so states.

Moreover, the specification states that image reading and loading may be effected "both automatically and in response to a user command." '811 Patent col. 3 l. 51-54. The specification discloses that the user may control certain functions, but reveals neither a "special definition given to a claim term by the patentee" nor an "intentional disclaimer, or disavowal, of claim scope by the inventor" requiring user input. Phillips, 415 F.3d at 1317. Instead, it explicitly states that the invention is not limited to the embodiment described in the specification. '811 Patent col. 13 l. 46-50. Accordingly, reading and interpreting Claim 1 "in light of the specifications," the Court declines to impose DR's proposed limitations. Phillips, 415 F.3d at 1316 (quoting United States v. Adams, 383 U.S. 39, 49 (1966)).

Note 2: "Image Data File"

The claims and specification of the '811 patent makes frequent use of the term "image data file." "[A]t all times, the language of the claims governs their scope and meaning." SmithKline Beecham Corp. v. Apotex Corp., 403 F.3d 1331, 1338-39 (Fed.Cir.2005). "The words of a claim are generally given their ordinary and customary meaning." Phillips, 415 F.3d at 1312 (internal citation omitted). The '811 patent claims a method for use with a database containing multiple "images digitized as image data and stored in respective image data files." U.S. Patent No. 5,414,811 col. 13 l. 56-59. The Court concludes that Claim 1 of the patent refers to multiple images, each of which is stored in an individual image data file.

Moreover, a disputed term must be construed "consistently with its appearance in other places in the same

claim or in other claims of the same patent." Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed.Cir.2001). Claim 20 of the '811 patent claims a method for "reading a selected image data file representing such input image from the digital database." '811 Patent col. 18 l. 33-34. Because this claim speaks of an image data file as representing a single image, it is consistent with the Court's interpretation of the term.

In addition to the claims themselves, the patent specification is "always highly relevant to the claim construction analysis. Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed.Cir.2005). Although it is "unacceptable to import limitations into a claim from the written description," the person of ordinary skill "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." Chamberlain Group, Inc. v. Lear Corp., 516 F.3d 1331, 1336 (Fed .Cir.2008); Phillips, 415 F.3d at 1313 (quoted in Netcraft Corp. v. eBay, Inc., 549 F.3d 1394, 1396-97 (Fed.Cir.2008)). Here, language in the patent specification also clarifies the relationship between image and file. The summary states that "each image data file correspond[s] to each of the images." '811 Patent col. 3 l. 9-10. Thus, the patent demonstrates the relationship between one image and one image data file.

Note 3: "At the Same Time"

Claim 1 states that multiple images are displayed and manipulated "at the same time" responsive to a single user command. U.S. Patent No. 5,414,811 col. 14 l.8-11. DR argues that this claim would not apply to a system performing these actions in sequence, even if the actions appear simultaneous to the user. DR's suggests the term "concurrently" to clarify the Patent's "at the same time" language. The word "concurrently" is found in a different context in Claims 15 and 16 of the patent, but not in Claim 1. If "concurrently" is more exacting than "at the same time," the Court will not use it in construing Claim 1. To do so would be to read limitations into one claim from other claims. The Federal Circuit has held that such constructions are erroneous as a matter of law. SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1122 (Fed.Cir.1985) ("It is settled law that when a patent claim does not contain a certain limitation and another claim does, that limitation cannot be read into the former claim").

CLAIM 2

(language for which the parties submitted proposed construction in bold)

A method as recited in claim 1 wherein:

the screen includes a two-dimensional array of screen pixels arranged in rows and columns; and

the step of defining includes selecting a plurality of subsets of the screen pixels, by row and column.

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"the step of defining includes selecting a plurality of subsets of the screen pixels, by row and column"	User defines two or more areas of the display screen by selecting two or more sections by row and by column.	Construction unnecessary {The defining step includes selecting	The defining step includes selecting two or more screen sections, by row and column.

two or more screen sections, by row and column.}

[COMMENT-The Court declines to adopt DR's proposed limitation requiring user input. See Note 1 above.]

CLAIM 5

(language for which the parties submitted proposed construction in bold)

A method as recited in claim 3 wherein the step of manipulating includes **decimating the image data.**

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"decimating the image data"	Reducing the size of the image (Agreed)		Reducing the size of the image [COMMENT-The Court accepts the parties' stipulated constructio n .]

CLAIM 6

(language for which the parties submitted proposed construction in bold)

A method as recited in claim 3 wherein the step of manipulating includes **cropping the image data.**

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"cropping the image data"	Displaying one or more portions of the image (Agreed)		Displaying one or more portions of the image [COMMENT-The Court accepts the parties' stipulated constructio n .]

CLAIM 7

(language for which the parties submitted proposed construction in bold)

A method as recited in claim 3 wherein the step of manipulating includes **zooming the image.**

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"zooming the image"	Enlarging or reducing an image or one or more portions of the image (Agreed)		Enlarging or reducing an image or one or more portions of the image [COMMENT-The Court accepts the parties' stipulated constructio n .]

CLAIM 8

(language for which the parties submitted proposed construction in bold)

A method as recited in claim 4 wherein the step of manipulating includes **panning the image.**

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"panning the image"	Scrolling the image or one or more portions of the image into or out of view (Agreed)		Scrolling the image or one or more portions of the image into or out of view [COMMENT-The Court accepts the parties' stipulated constructio n .]

CLAIM 10

(language for which the parties submitted proposed construction in bold)

An apparatus, useful with a system including a digital database that store sequentially adjacent image data files containing digitized image datea corresponding to input images, for controlling the manner in which the digitized image data is accessed from the image data files in the digital database and provided to an output of the apparatus for display on an image display device, said apparatus comprising:

a plurality of image memories for storing digitized image data read from the database;

user command means for registering user commands, including a particular read command to read and display a selected image data file from the database and a subsequent user command to read and to display a sequentially adjacent image data file; and

control means responsive to the particular read command for reading the selected image data file and storing the corresponding image data in one of the image memories for subsequent display on the display device, wherein said control means is further responsive to said particular read command for reading one or more image data files sequentially adjacent to the selected image data file and storing the corresponding one or more sequentially adjacent digitized image data in one or more of the remaining image memories without displaying said sequentially adjacent data files until said subsequent user command is registered, whereby access time to display the sequentially adjacent image file pursuant to said subsequent user command is shortened because the sequentially adjacent image file has already been read from the database into one of said image memories.

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"user command means for registering user commands, including a particular read command to read and display a selected image data file from the database and a subsequent user command to read and to display a sequentially adjacent	Subject to 35 U.S.C. s. 112 para. 6	Subject to 35 U.S.C. s. 112 para. 6	

image data file"			
	Function-Registering user commands (Agreed) Structure-keyboard, IR remote control unit, selector switches of cabinet-resident control panel	Function-Registering user commands (Agreed) Structure-input-output device, including a keyboard, IR remote control unit, or selector switches of a cabinet-resident control panel	Function-Registering user commands Structure-input-output device capable of performing the function, including a keyboard, IR remote control unit, or selector switches of a cabinet-resident control panel
			[COMMENT-The specification states that "the user enters a command by way of an I/O device (e.g. keyboard, IR remote control unit) to view a selected image...." (1:67) In response to DR's argument that some input-output devices are incapable of performing this function, the Court has limited its construction to exclude such devices. A means-plus-function claim is construed to cover the corresponding structure and "equivalents thereof." 35 U.S.C. s. 112. The Court declines to limit this claim to a finite list of devices in light of the language in the claim and specification.]
"control means responsive to the particular read command for reading the selected image data file and storing the corresponding image data in one of the image memories for subsequent display on the display device, wherein said	Subject to 35 U.S.C. s. 1121 para. 6	Subject to 35 U.S.C. s. 1121 para. 6	

control means is further responsive to said particular read command for reading one or more image data files sequentially adjacent to the selected image data file and storing the corresponding one or more sequentially adjacent digitized image data in one or more of the remaining image memories without displaying said sequentially adjacent data files until said subsequent user command is registered"			
	Function-In response to a first user input identifying a first image data file that the user wants displayed, the corresponding image data file is retrieved from the database. The data contained in the file for the first image is stored in one of the multiple image memories.	Function-Construction unnecessary	Function-Reading a selected image data file into an image memory, and reading one or more image files that are sequentially adjacent to the first image file into other image memories, and not displaying the sequentially adjacent image files until another user command is received.
	In response to the first user input identifying a first image data file that the user wants displayed, the image data file(s) corresponding to image(s) immediately before and/or immediately after the first image are retrieved from the digital database, but no other image data files are retrieved. The data	{Reading a selected image data file into a portion of memory, and reading one or more image files that are in sequence with the first image file into other portions of memory, and not displaying the image files	

contained in the image data file for each image immediately before and/or immediately after the first image data file is stored in its own image memory which is separate and apart from the image memory holding the first image data file. The image(s) immediately before and/or immediately after the first image picked by the user is not displayed until a subsequent user in input occurs.	until another user command is received.}	
Structure-insufficiently disclosed	Structure-memory controller, microcontroller and associated programming.	Structure-Memory controller, microcontroller and associated programming performing the following steps: (1) images are arranged in numerical order, such as the order in which the images appeared on film, or an order determined by the user and stored in an electrically erasable memory (8:48-58), (2) responsive to a read command, data for a first image is read, (3) image data for a first image is stored in a first image memory, (4) the first image is displayed, (5) data for a second sequentially adjacent image is read, (6) image data for the second image is stored in a second image memory, and (7) responsive to a subsequent user command, the second image is accessed from the second image memory. (2:54-64) [COMMENT-The Court declines to adopt a construction requiring user input identifying

the first image to be displayed. See Note 1 above.

DR's proposed construction limits the phrase "sequentially adjacent" to include only the image immediately preceding the selected image and the image immediately following the selected image. However, the claim language indicates that "one or more" sequentially adjacent image data files are preloaded-not "one or two" or "one or both." Further, the specification describes an embodiment with the capability of storing four image data files in short term memory. (8:59-66) DR's proposed construction would render one of these image memories superfluous for this function. Accordingly, the Court concludes that "sequentially adjacent" is not limited to two images.

As to DR's argument that structure is insufficiently disclosed, see Note 4 below.]

Note 4: Definiteness of Means-Plus-Function Claims

"The first step in analyzing a claim written in means-plus-function form is to identify the claimed function." Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d 1308, 1318 (Fed.Cir.2003). Next, the court must "look to the written description to identify the structure corresponding to the function." Id. at 1320. A claim that fails to adequately disclose a structure in the specification that performs the claimed function is indefinite and invalid. Budde v. Harley-Davidson, Inc ., 250 F.3d 1369, 1376 (Fed.Cir.2001). A patent challenger arguing insufficient disclosure must show by clear and convincing evidence "that the specification lacks disclosure of structure sufficient to be understood by one skilled in the art as being adequate to perform the recited function." Id. at 1376-77.

The Federal Circuit has held that a patentee must disclose more than a "general purpose computer as the structure designed to perform that [claimed] function." Aristocrat Tech. Australia Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed.Cir.2008). "[T]he corresponding structure for a s. 112 para. 6 claim for a computer-implemented function is the algorithm disclosed in the specification." Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1249 (Fed.Cir.2005). DR argues that the '811 Patent fails to sufficiently disclose an algorithm or specific programming, rendering several of its means-plus-function claims indefinite and invalid. However, sufficiency of structure disclosure is assessed from the viewpoint of one skilled in the art.

AllVoice Computing PLC v. Nuance Commc'ns, Inc., 504 F.3d 1236, 1240 (Fed.Cir.2007). Therefore, a means-plus-function claim is indefinite only "if a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim." Id. at 1241. In *AllVoice,* the Federal Circuit held that the patentee need not disclose specific program code and the internal circuitry of an electronic device if one of ordinary skill in the art would understand what program to use and how to build the device. *Id*. at 1245. In that case, a simple flowchart outlining the steps taken by the claimed program was sufficient. *Id*. at 1245 (Fig.8A). The Federal Circuit permits a patentee to express the required algorithm "in any understandable terms including a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340 (Fed.Cir.2008). Kodak maintains that the patent discloses sufficient structure and that one skilled in the art would understand that structure. For purposes of claim construction, Plaintiff has not shown by clear and convincing evidence that the '811 Patent's specification does not disclose an adequate step-by-step process for accomplishing the claimed functions. Budde, 250 F.3d at 1376. The Court notes that there is no pending summary judgment motion raising this issue.

CLAIM 15

(language for which the parties submitted proposed construction in bold)

A method, for use with a digital image processing system including a digital database having a plurality of images digitized as image data and stored in respective image data files therein, said image data including a plurality of image data pixels, each image data pixel having a row and column associated therewith, a plurality of image memories, and an output for coupling thereto an image display device having a screen for display of images, such display including a two-dimensional array of screen pixels arranged in rows and columns, the method comprising the steps of:

defining the screen to contain a plurality of sections, each section including a plurality of subsets comprising rows and columns of screen pixels;

selecting a plurality of image data files;

reading image data from the selected plurality of image data files and loading the image data into respective image memories;

allocating at least two image memories containing image data to at least two sections of the screen, respectively;

displaying the image data from the at least two image memories on the respective screen sections by mapping the image data pixels onto the screen pixels of the respective screen section, by row an column;

selecting a plurality of the images displayed on the screen for manipulation; and

manipulating each of the selected images in response to a single user command so that all of the selected images are manipulated in the same way at the same time, said manipulating step comprising the step of zooming the image by defining, by minimum and maximum row and minimum and maximum column, a subset of the image data, redefining the subset by one of (a) increasing the minima and decreasing the maxima, and (b) decreasing the minima and increasing the maxima, incrementally over a period of time responsive to a user command, and displaying the subset, in

accordance with the changing definition of the minima and maxima of the subset, concurrently with the time period over which the minima and maxima are redefined.

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"manipulating each of the selected images in response to a single user command so that all of the selected images are manipulated in the same way at the same time"	Manipulating each of the selected images so that the same manipulation is applied to each selected image concurrently (i.e. the applied manipulations do not occur one after the other) without the need for another user command.	Construction unnecessary {Manipulating each of the selected images so that the same manipulation is applied to each selected image at the same time without need for another user command.}	Manipulating each of the selected images so that the same manipulation is applied to each selected image at the same time without need for another user command
			[COMMENT-DR's proposed construction states that events taking place in rapid succession cannot occur "at the same time." See Note 3 below.]
"said manipulating step comprising the step of zooming the image by defining, by minimum and maximum row and minimum and maximum column, a subset of the image data, redefining the subset by one of (a) increasing the minima and decreasing the maxima, and (b) decreasing the minima and increasing the maxima, incrementally	The manipulating step includes a zooming operation, which can either (a) zoom in, or (b) zoom out. The zooming operation is carried out over	Zooming each of the selected images in response to a single user command. Zooming can either be (a) in, or (b) out. The zooming operation is carried out over	The manipulating step includes a zooming operation, which can zoom all selected images (a) in, or (b) out. The zooming operation is carried out over time as the user

over a period of time responsive to a user command, and displaying the subset, in accordance with the changing definition of the minima and maxima of the subset, concurrently with the time period over which the minima and maxima are redefined"	time as the user performs the zoom command and the image is concurrently redisplayed as the zooming is being performed.	time as the user performs a command, and the image is redisplayed as the zooming is performed over the same period of time.	performs a command and the image is concurrently redisplayed as the zooming is being performed. [COMMENT-The Court declines to adopt DR's proposed limitation that the panning operation occurs only in response to the user's "panning command." This limitation is not contained in the claim language, nor is it indicated by the specification.]

CLAIM 16

(language for which the parties submitted proposed construction in bold)

A method, for use with a digital image processing system including a digital database having a plurality of images digitized as image data and stored in respective image data files therein, said image data including a plurality of image data pixels, each image data pixel having a row and column associated therewith, a plurality of image memories, and an output for coupling thereto an image display device having a screen for display of images, such display including a two-dimensional array of screen pixels arranged in rows and columns, the method comprising the steps of:

defining the screen to contain a plurality of sections, each section including a plurality of subsets comprising rows and columns of screen pixels;

selecting a plurality of image data files;

reading image data from the selected plurality of image data files and loading the image data into respective image memories;

allocating at least two image memories containing image data to at least two sections of the screen, respectively;

displaying the image data from the at least two image memories on the respective screen sections by

mapping the image data pixels onto the screen pixels of the respective screen section by row an column;

selecting a plurality of the images displayed on the screen for manipulation; and

manipulating each of the selected images in response to a single user command so that all of the selected images are manipulated in the same way at the same time, said manipulating step comprising the step of panning the image by defining, by minimum and maximum row and minimum and maximum column, a subset of the image data, redefining the subset by one of (a) increasing the row minimum and maximum, (b) decreasing the row minimum and maximum, (c) increasing the column minimum and maximum, and (d) decreasing the column minimum and maximum, incrementally over a period of time responsive to a user command, and displaying the subset, in accordance with the changing definition of the minima and maxima of the subset, concurrently with the time period over which the minima and maxima are redefined.

Claim Language	**DR Systems**	**Eastman Kodak**	**Court's Construction**
"manipulating each of the selected images in response to a single user command so that all of the selected images are manipulated in the same way at the same time"	Manipulating each of the selected images so that the same manipulation is applied to each selected image concurrently (i.e. the applied manipulations do not occur one after the other) without the need for another user command.	Construction unnecessary {Manipulating each of the selected images so that the same manipulation is applied to each selected image at the same time without need for another user command.	Manipulating each of the selected images so that the same manipulation is applied to each selected image at the same time without need for another user command
			[COMMENT-DR's proposed construction states that events taking place in rapid

			succession cannot occur "at the same time." See Note 3 above.]
"said manipulating step comprising the step of panning the image by defining, by minimum and maximum row and minimum and maximum column, a subset of the image data, redefining the subset by one of (a) increasing the row minimum and maximum, (b) decreasing the row minimum and maximum, (c) increasing the column minimum and maximum, and (d) decreasing the column minimum and maximum, incrementally over a period of time responsive to a user command, and displaying the subset, in accordance with the changing definition of the minima and maxima of the subset, concurrently with the time period over which the minima and maxima are redefined"	The manipulating step includes a panning operation, which can either (a) pan down, (b) pan up, (c) pan right, or (d) pan left. The panning operation is carried out over time as the user performs the panning command and the image is concurrently redisplayed as the panning is being performed.	Construction unnecessary {Panning each of the selected images in response to a single user command. Panning can be (a) down, (b) up, (c) right, or (d) left. The panning operation is carried out over time as the user performs a command, and the image is redisplayed as the panning is performed over the same period of time.	The manipulating step includes a panning operation, which can pan all selected images (a) down, (b) up, (c) right, or (d) left. The panning operation is carried out over time as the user performs a command and the image is concurrently redisplayed as the panning is being performed. [COMMENT-The Court declines to adopt DR's proposed limitation that the panning

operation occurs only in response to the user's "panning command." This limitation is not contained in the claim language, nor is it indicated by the specification.]

CLAIM 17

(language for which the parties submitted proposed construction in bold)

An apparatus, useful with a system including a digital database that stores sequentially adjacent image data files containing digitized image data corresponding to input images, for controlling the manner in which the digitized image data is accessed from the image data files in the digital database and provided to an output of the apparatus for display on an image display device, said apparatus comprising:

a plurality of image memories for storing digitized image data read from the database;

user command means for registering user commands, including a particular read command to read and display a selected image data file from the database and a subsequent user command to read and to display a sequentially adjacent image data file;

control means responsive to the particular read command for reading the selected image data file and storing the corresponding image data in one of the image memories for subsequent display on the display device, wherein said control means is further responsive to said particular read command for reading one or more image data files sequentially adjacent to the selected image data file and storing the corresponding one or more sequentially adjacent digitized image data in one or more of the remaining image memories, whereby access time to display the sequentially adjacent image file pursuant to said subsequent user command is shortened because the sequentially adjacent image file has already been read from the database into one of said image memories; and

means for controllably generating border image signals representative of image characteristics of at least one border region to be combined with the image data, and for coupling the border image signals to the image display device so that the image reproduced thereby is bound by the at least one border region.

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"control means responsive to the particular read command for reading the selected image data file and storing the corresponding image data in one of the image memories for subsequent display on the	Function-In response to a first user input identifying a first image data file that the user wants displayed, the corresponding image	Function-Construction unnecessary	Function-Reading a selected image data file into an image memory, and reading one or more image files that are sequentially adjacent to the first image file into other image memories.

display device, wherein said control means is further responsive to said particular read command for reading one or more image data files sequentially adjacent to the selected image data file and storing the corresponding one or more sequentially adjacent digitized image data in one or more of the remaining image memories, whereby access time to display the sequentially adjacent image file pursuant to said subsequent user command is shortened because the sequentially adjacent image file has already been read from the database into one of said image memories"	data file is retrieved from the database. The data contained in the file for the first image is stored in one of the multiple image memories.	
	In response to the first user input identifying a first image data file that the user wants displayed, the image data file(s) corresponding to image(s) immediately before and/or immediately after the first image are retrieved from the digital database, but no other image data files are retrieved. The data contained in the image data file for each image immediately before and/or immediately after the first image data file is stored in its own image memory which is separate and apart from the image	{Control means for reading a selected image into a portion of memory; the control means is responsive to a command for reading one or more image files that are in sequence with the first image file into other portions of memory.}

memory holding the first image data file. The image(s) immediately before and/or immediately after the first image picked by the user is not displayed until a subsequent user input occurs.		
Structure-Insufficiently disclosed	Structure-memory controller, microcontroller and associated programming.	Structure-Memory controller, microcontroller and associated programming performing the following steps: (1) images are arranged in numerical order, such as the order in which the images appeared on film, or an order determined by the user and stored in an electrically erasable memory (8:48-58), (2) responsive to a read command, data for a first image is read, (3) image data for a first image is stored in a first image memory, (4) the first image is displayed, (5) data for a second sequentially adjacent image is read, (6) image data for the second image is stored in a second image memory, and (7) responsive to a subsequent user command, the second image is accessed from the second image memory. (2:54-64) [COMMENT-The Court declines to adopt a construction requiring user input identifying the first image to be displayed. See Note 1 above. DR's proposed construction limits the phrase "sequentially adjacent" to include only the image immediately preceding the selected image and the

			image immediately following the selected image. However, the claim language indicates that "one or more" sequentially adjacent image data files are preloaded-not "one or two" or "one or both." Further, the specification describes an embodiment with the capability of storing four image data files in short term memory. (8:59-66) DR's proposed construction would render one of these image memories superfluous for this function. Accordingly, the Court concludes that "sequentially adjacent" is not limited to two images.
			As to DR's argument that structure is insufficiently disclosed, see Note 4 above.]
"means for controllably generating border image signals representative of image characteristics of at least one border region to be combined with the image data, and for coupling the border image signals to the image display device so that the image reproduced thereby is bound by the at least one border region"	Subject to 35 U.S.C. s. 112 para. 6	Subject to 35 U.S.C. s. 112 para. 6	
	Function-controllably generating border image signals representative of image characteristics of at least one border region to be combined with the image data, and for coupling the border image signals to the image display device so that the image	Function-controllably generating border image signals representative of image characteristics of at least one border region and coupling the border image signals	Function-controllably generating border image signals representative of image characteristics of at least one border region to be combined with the image data, and coupling the border image signals to the image display device.

	reproduced thereby is bound by the at least one border region.	to the image display device.	
	Structure-insufficiently disclosed	Structure-border generator	Structure-border generator [COMMENT-The Court excludes the claim language beginning with "so that ..." because a "clause that merely states the result of the limitations in the claim adds nothing to the substance of the claim" and is not properly part of the function. *Lockheed Martin Corp. v. Space Sys./Loral, Inc.,* 324 F.3d 1308, 1319 (Fed.Cir.2003). As to DR's argument that structure is insufficiently disclosed, see Note 4 above.]
"border image signals"	Signals that represent image characteristics of at least one border region.	Signals which produce a border around an image.	Signals which produce a border around an image. [COMMENT-At the hearing, DR stipulated to Kodak's construction. The Court accepts the parties' stipulated construction.]
"border region"	An area within the image that is located near the periphery of that image.	An area at the periphery of the image where a border appears.	An area at the periphery of the image where a border appears. [COMMENT-At the hearing, DR stipulated to Kodak's construction. The Court accepts the parties' stipulated construction.]

CLAIM 18

(language for which the parties submitted proposed construction in bold)

An apparatus, useful with a system including a digital database that stores sequentially adjacent image data files containing digitized image data corresponding to input images, for controlling the manner in which the

digitized image data is accessed from the image data files in the digital database and provided to an output of the apparatus for display on an image display device, said apparatus comprising:

a plurality of image memories for storing digitized image data read from the database;

user command means for registering user commands, including a particular read command to read and display a selected image data file from the database and a subsequent user command to read and to display a sequentially adjacent image data file; and

control means responsive to the particular read command for reading the selected image data file and storing the corresponding image data in one of the image memories for subsequent display on the display device, wherein said control means is further responsive to said particular read command for reading one or more image data files sequentially adjacent to the selected image data file and storing the corresponding one or more sequentially adjacent digitized image data in one or more of the remaining image memories, whereby access time to display the sequentially adjacent image file pursuant to said subsequent user command is shortened because the sequentially adjacent image file has already been read from the database into one of said image memories, and wherein said control means comprises **means for controllably reading image data files from the database in a first selected order;** and **means for loading image data from the thus read image data files into respective ones of the plurality of image memories in a second selected order.**

Claim Language	DR Systems	Eastman Kodak	Court's Construction
"means for controllably reading image data files from the database in a first selected order"	Subject to 35 U.S.C. s. 112 para. 6	Subject to 35 U.S.C. s. 112 para. 6	
	Function-controllably reading image data files from the database in a first order selected by a user.	Function-controllably reading image data files from the database in a first selected order.	Function-controllably reading image data files from the database in a first selected order.
	Structure-insufficiently disclosed	Structure-Memory controller, microcontroller and associated programming.	Structure-Memory controller, microcontroller and associated programming performing the following steps: (1) images are arranged in numerical order, such as the order in which the images appeared on film, or an order determined by the user and stored in an electrically erasable memory (8:48-58), (2) data for the thus ordered images is read in order. [COMMENT-The Court declines to adopt DR's proposed limitation requiring user input. See

			Note 1 above.
			As to DR's argument that structure is insufficiently disclosed, see Note 4 above.]
"means for loading image data from the thus read data files into respective ones of the plurality of image memories in a second selected order"	Subject to 35 U.S.C. s. 112 para. 6	Subject to 35 U.S.C. s. 112 para. 6	
	Function-loading image data from the thus read image data files into respective ones of the plurality of image memories in a second order selected by the user.	Function-loading image data from the thus read image data files into respective ones of the plurality of image memories in a second selected order.	Function-loading image data from the thus read image data files into respective ones of the plurality of image memories in a second selected order.
	Structure-insufficiently disclosed	Structure-Memory controller, microcontroller and associated programming.	Structure-Memory controller, microcontroller and associated programming performing the following steps: (1) images are arranged in numerical order, such as the order in which the images appeared on film, or an order determined by the user and stored in an electrically erasable memory (8:48-58), (2) data for the thus ordered images is read in order, (3) image data is loaded into respective image memories according to a second selected order. [COMMENT-The parties agree as to function and the Court adopts their construction. As to DR's argument that structure is insufficiently disclosed, see Note 4 above.]

CLAIM 20

(language for which the parties submitted proposed construction in bold)

A method for controlling the manner in which digitized image data is accessed from a plurality of image data files in a digital database in order to display such digitized image data on an image display device, said database containing image data files representing a plurality of sequentially adjacent input images, said

method comprising the steps of:

providing a plurality of image memories for storing digitized image data read from the database;

in response to a **read command** signaling a desire to display a selected input image on the display device, **reading a selected image data file representing such input image from the digital data base, storing the corresponding digitized image data in one of the image memories, and displaying the input image represented by the so stored digitized image data on the display device;** and

in response to the same read command, **reading one or more additional image files representing input images that are sequentially adjacent to the input image represented by the selected image data file and storing the corresponding digitized image data in one or more of the remaining image memories without displaying the sequentially adjacent input images until a subsequent user command is registered,** whereby access time to display a sequentially adjacent input image pursuant to a subsequent user command is shortened because the corresponding sequentially adjacent image file has already been read from the database and stored in one of the additional image memories.

Claim Language	**DR Systems**	**Eastman Kodak**	**Court's Construction**
"read command"	A user input identifying a specific image that the user wants to display on the display device.	Construction unnecessary. {A command to retrieve}	A user input identifying a specific image that the user wants to display on the display device.
			[According to the claim language, the read command "signal[s] a desire to display a selected input image on the display device." Because a device is incapable of having such a desire, the Court concludes that the "read command" requires user input.]
"reading a selected image data file representing such input image from the digital data base, storing the corresponding digitized image data in one of the image memories, and displaying the input image represented by the so stored digitized image data	The corresponding image data file for the first image is retrieved from the digital database. The image data contained in the file for the first image is stored in one of the image memories. The first image represented by the image data is displayed on the display screen.	Construction unnecessary	Reading an image data file from the digital database, storing the image data in memory, and displaying the image.

on the display device"

		{Reading an image data file from the digital database, storing the image data in memory, and displaying the image.}	
"reading one or more additional image files representing input images that are sequentially adjacent to the input image represented by the selected image data file and storing the corresponding digitized image data in one or more of the remaining image memories without displaying the sequentially adjacent input images until a subsequent user command is registered"	The image data file(s) corresponding to the image(s) immediately before and/or after the first image is retrieved from the digital database, but no other images are received. The data contained in the file for each image immediately before and/or after the first image is stored in its own image memory. The images immediately before and/or immediately after the first image selected by the user is not displayed until a subsequent user input occurs.	Construction unnecessary. {Reading one or more additional image files that are in sequence with the first selected image, and storing the images in memory without displaying them until	Reading a selected image data file into an image memory, and reading one or more image files that are sequentially adjacent to the first image file into other image memories, and not displaying the sequentially adjacent image files until another user command is received.

another user command occurs.}

[COMMENT-DR's proposed construction limits the phrase "sequentially adjacent" to include only the image immediately preceding the selected image and the image immediately following the selected image. However, the claim language indicates that "one or more" sequentially adjacent image data files are preloaded-not "one or two" or "one or both." Further, the specification describes an embodiment with the capability of storing four image data files in short term memory. (8:59-66) DR's proposed construction would render one of these image memories superfluous for this function. Accordingly, the Court concludes that "sequentially adjacent" is not limited to two images.]

S.D.Cal.,2009.
DR Systems, Inc. v. Eastman Kodak Co.