

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

ST. CLAIR INTELLECTUAL PROPERTY :  
CONSULTANTS, INC., :  
 :  
Plaintiff, :  
 :  
v. : Civil Action No. 03-241 JJF  
 :  
CANON INC., CANON U.S.A., INC., :  
FUJI PHOTO FILM CO., LTD, :  
FUJI PHOTO FILM U.S.A., INC., :  
and FUJIFILM AMERICA, INC., :  
 :  
Defendants. :

---

Frederick L. Cottrell, III, Esquire and Chad Shandler, Esquire of RICHARDS, LAYTON & FINGER, Wilmington, Delaware.  
Of Counsel: Ronald J. Schutz, Esquire, Jake M. Holdreith, Esquire, Becky R. Thorson, Esquire, Carrie M. Lambert, Esquire, and Kimberly G. Miller, Esquire of ROBINS, KAPLAN, MILLER & CIRESI, L.L.P., Minneapolis, Minnesota.  
Attorneys for Plaintiff.

Jack B. Blumenfeld, Esquire and Julia Heaney, Esquire of MORRIS, NICHOLS, ARSHT & TUNNELL, Wilmington, Delaware.  
Of Counsel: John E. Daniel, Esquire, Donald L. Rhoads, Esquire, and Vito J. DeBari, Esquire of KRAMER LEVIN NAFTALIS & FRANKEL LLP, New York, New York.  
Attorneys for Defendants Canon Inc. and Canon U.S.A., Inc.

Steven J. Balick, Esquire and John G. Day, Esquire of ASHBY & GEDDES, Wilmington, Delaware.  
Of Counsel: Steven J. Routh, Esquire and Sten Jensen, Esquire of HOGAN & HARTSON, L.L.P., Washington, District of Columbia.  
Robert J. Benson, Esquire and David H. Ben-Meir, Esquire of HOGAN & HARTSON, L.L.P., Los Angeles, California.  
Attorneys for Defendants Fuji Photo Film Co., Ltd., Fuji Photo Film U.S.A., and Fujifilm America.

---

**MEMORANDUM OPINION**

August 31, 2004

Wilmington, Delaware

**Farnan, District Judge.**

This action was brought by Plaintiff, St. Clair Intellectual Property Consultants, Inc. ("St. Clair") against Defendants Canon Inc. and Canon U.S.A., Inc. (collectively "Canon") and Fuji Photo Film Co., Ltd., Fuji Photo Film U.S.A., and Fujifilm America (collectively "Fuji") alleging infringement of United States Patent Nos. 5,138,459 (the "'459 patent"), 6,094,219 (the "'219 patent"), 6,233,010 (the "'010 patent"), and 6,323,899 (the "'899 patent"). In a previous case, Sony v. St. Clair, Civ. Act. No. 01-557-JJF, mem. op. and order (D. Del. Sept. 3, 2002), the Court issued a claim construction for several terms in the patents-in-suit. In this case, the Court conducted a Markman hearing for the disputed patent terms on Monday, April 12, 2004, and the parties have briefed their respective positions on claim construction, including the effect of the Court's previous claim construction on the current litigation. This Memorandum Opinion presents the Court's construction for the disputed claim terms.

**BACKGROUND**

**I. Introduction to the Technology Generally**

The patents-in-suit relate to digital camera technology. The patents-in-suit cover electronic cameras that can save digital photographs in multiple memory formats for use on personal computers.

**II. The Patents**

The patents-in-suit describe electronic still cameras, and each of the patents-in-suit has a common specification, whereby each patent claims different variations and embodiments of the technology. Using the patented cameras, analog image signals are converted into their digital equivalents. The digital equivalents are then compressed into a user-determined format and saved for later decompression and use with a personal computer.

Under the conventional prior art, electronic still cameras produced analog equivalents for a captured image. Using this prior art, the conversion of the analog equivalent into a digital format for use with personal computers was expensive and burdensome. The object of the patents-in-suit was to create the more facile conversion of analog images into digital formats for utilization with personal computers.

A. The '459 patent

The '459 patent was filed on November 20, 1990, and is the basis for the other patents-in-suit. Claims 16 and 17 of the '459 patent are asserted in this case. The asserted claims of the '459 patent describe a process for storing an electronically sensed video image by generating an analog image signal and converting the analog image signal into digital data information.

B. The '291 patent

The '219 patent was filed on May 22, 1996. Claims 1, 2, 3, 8, 10, 12, 16, 17, and 18 of the '219 patent are asserted in this

case. The asserted claims of the '219 patent describe electronic cameras that can digitize and store captured image data in a plurality of output data format codes. The asserted claims of the '219 patent also describe the ability to determine image resolution, determine compression parameters, and remove memory in the patented cameras.

C. The '010 patent

The '010 patent was filed on February 19, 1999. Claim 1 of the '010 patent is asserted in this case. Claim 1 of the '010 patent describes digital cameras that can take pictures and store them in a removable storage device.

D. The '899 patent

The '899 patent was filed on April 3, 2000. Claims 1, 2, 3, and 4 of the '899 patent are asserted in this case. The asserted claims of the '899 patent describe electronic cameras that can take and store digital images in a plurality of computer image file formats and the use of removable storage devices with such cameras.

## DISCUSSION

### I. **The Legal Principles of Claim Construction**

Claim construction is a question of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 977-78 (Fed. Cir. 1995), aff'd, 517 U.S. 370, 388-90 (1996). When construing the claims of a patent, a court considers the literal language of the claim,

the patent specification, and the prosecution history. Markman, 52 F.3d at 979. A court may consider extrinsic evidence, including expert and inventor testimony, dictionaries, and learned treatises, in order to assist it in construing the true meaning of the language used in the patent. Id. at 979-80 (citations omitted).

A court should interpret the language in a claim by applying the ordinary and accustomed meaning of the words in the claim. Envirotech Corp. v. Al George, Inc., 730 F.2d 753, 759 (Fed. Cir. 1984). However, if the inventor clearly supplies a different meaning, the claim should be interpreted accordingly. Markman, 52 F.3d at 980 (noting that patentee is free to be his own lexicographer, but emphasizing that any special definitions given to words must be clearly set forth in the patent). If possible, claims should be construed to uphold validity. In re Yamamoto, 740 F.2d 1569, 1571 & n.\* (Fed. Cir. 1984) (citations omitted).

## **II. The Meaning of the Disputed Terms**

### **A. Whether The Claims Of The Patents-In-Suit Are Limited To Cameras With Data Formats That Correspond To Different Types Of Computer Architectures**

1. The '459 patent, claim 16: "plurality of different data formats for different types of computer apparatus"

Claim 16 of the '459 patent, in relevant part, describes a camera that stores images in a "plurality of different data formats for different types of computer apparatus." (D.I. 486,

Ex. 4.) The parties dispute whether the reference in this element to "different data formats" is limited to formats relating to different computer architectures (e.g. formats for IBM or Apple computers) or can also include formats relating to different computer software (e.g. formats for GIFF or PICT software). The parties' dispute as to this element of claim 16 of the '459 patent is representative of their dispute over similarly worded phrases in the '219, '010, and '899 patents.

Fuji and Canon (collectively "Defendants") contend that "data formats" should be construed to mean formats that are different because they correspond to different types of computer architectures. Defendants contend that the '459 patent only provides for a camera with compatibility between different types of computer architectures and does not provide for a camera with compatibility between different types of software. Defendants contend that this issue is distinct from the issues considered by the Court in Sony.

Conversely, St. Clair contends that the Court resolved the meaning of the disputed phrase in Sony when it construed the key terms comprising the phrase, and St. Clair contends that there is no reason to reverse the Court's prior decision. St. Clair contends that the '459 patent discloses a camera compatible with different types of computer software, in addition to a camera compatible with different types of computer architecture.

After reviewing the parties' arguments in light of the claim language and specification of the '459 patent, the Court agrees with the construction advanced by St. Clair. In Sony, the Court issued a claim construction for both of the key terms in the phrase "a plurality of different data formats for different types of computer apparatus." Specifically, the Court defined the term "data format" to mean "the arrangement of digital data in a file" and the term "computer apparatus" to mean "a computer and any operating system or application software loaded on the computer." Sony, Civ. Act. No. 01-557-JJF, order at ¶ 1. The Court concludes that these definitions are correct and should be applied to the construction of the phrase in dispute, so that the different formats referred to in this claim element may correspond to different architectures or different software.

Defendants contend that the use of the phrase "different types of" in the context of "different types of computer apparatus" limits the phrase to different types of computers. The Court is not persuaded by Defendants' argument. Neither the plain language of claim 16 nor the specification of the '459 patent support a construction as narrow as Defendants propose. Defendants' proposed construction ignores the plain language of the disputed element by excising the word "apparatus" from the phrase. The plain language of the disputed phrase refers to "different types of computer apparatus" and not just different

types of computers, and the phrase "computer apparatus" includes different application software loaded on the computers, as well as different computers and operating systems. Thus, the Court's construction is supported by the plain language of the claim.

In addition, the Court's claim construction is supported by the specification of the '459 patent. The specification of the '459 patent explains that the patent is directed to the incorporation of digital image files into different software applications. As the Background of the Invention explains:

The digital diskette is removable from the electronic camera for direct insertion into a PC which contains the previously loaded corresponding decompression algorithm whereby the digital image is in a format compatible for immediate use with word processing, desktop publishing, data base, and multi-media applications."

'459 patent, col. 1, ll. 19-25 (emphasis added). Describing the problem addressed by the '459 patent and distinguishing the claimed invention from the prior art, the specification further explains that "with the current state of the art, it is expensive and time consuming to convert the analog image equivalent to a digital format for direct utilization with PC software applications." '459 patent, col. 1, ll. 57-60 (emphasis added).

The objective of the patent to provide compatibility with different types of software is also confirmed in the Summary of the Invention, which explains that "[i]t is a further object of this invention to provide an improved electronic still camera



that provides digital image files for immediate and direct incorporation into popular word processing, desktop publishing, and other software programs on PCs." '459 patent, col. 2, ll. 15-19. The specification goes on to discuss the selection of software formats in the patented camera, further demonstrating that the patent is not limited to the computer architecture problem. '459 patent, col. 4, l. 68 - col. 5, l. 9; col. 11, ll. 32-49.

Defendants also refer to the prosecution history to limit the invention to different types of computers. Specifically, Defendants point to the prosecution history of the related '219 patent and contend that the Patent Examiner refused to allow claims for different types of "computer programs." Defendants argument, however, takes the prosecution history out of context. Specifically, the prosecution history indicates that the Patent Examiner actually allowed all claims using the term "computer programs" (D.I. 521, Ex. 71 at St. Clair 82466-68), and it was not until certain prior art was raised that all the claims were rejected on grounds unrelated to the choice of the word "computer program" over "computer apparatus." (D.I. 521, Ex. 73 at St Clair 82498); D.I. 521, Ex. 74 at St. Clair 82508-24.) That the claims were ultimately allowed with the word "computer apparatus" instead of "computer program" does not mean that St. Clair abandoned "computer programs." Rather, it appears to the Court

that St. Clair simply chose to pursue the broadened term of "computer apparatus." Accordingly, the Court is not persuaded that the prosecution history conflicts with or negates St. Clair's proposed construction.

In sum, the Court concludes that its prior construction of the terms "data format" and "computer apparatus" provides the proper construction for the phrase "plurality of different data formats for different types of computer apparatus." However, the Court will slightly modify its construction in the manner proposed by St. Clair to avoid any potential confusion in light of the particular arguments raised by Defendants.<sup>1</sup> Accordingly, the Court construes the phrase a "plurality of different data formats for different types of computer apparatus" to mean "a plurality of different data formats for different types of computer apparatus where: (1) a 'data format' is the arrangement of digital data in a file including image, audio, text or other data and includes, at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD and WAV, and (2) a 'computer apparatus'

---

<sup>1</sup> St. Clair requests the Court to remove DCF from the list of examples of file formats provided by the Court in its construction of the terms "image file format," "file format," "data file format" and "data format" in Sony. St. Clair contends that DCF is not asserted to be a file format in any of the accused cameras, and that confusion may result, because the letters "DCF" are used by Defendants to relate to a certain camera specification. The Court concludes that removal of this example is not necessary. The parties can make their respective arguments concerning DCF to the jury.

is a computer and any operating system or application software loaded on the computer. Computer apparatus are of 'different types' within the meaning of the claim if they are loaded with different application software, even if they are otherwise the same."

2. The other claims as to which the parties dispute whether there is a limitation concerning computer architectures

The parties also dispute whether the other asserted claims of the patents-in-suit should be construed to require a camera that provides compatibility between different types of computer architectures. These claims occasionally use different terms than claim 16 of the '459 patent, but generally convey the same meaning.<sup>2</sup> In accordance with these similarities, the parties agree that the terms and phrases of the various patents should be construed consistently.

As stated above, the Court believes claim 16 of the '459 patent is representative of the language on format in the other claims of the patents-in-suit. Similar, if not identical, terms are used in each patent and each patent contains the same specification. Further, to the extent different terms have been used, the Court previously construed those terms in the same

---

<sup>2</sup> For example, claim 1 of the '219 patent discloses "a plurality of different data formats for different types of information handling systems."

manner in Sony.<sup>3</sup> Thus, for all the patents-in-suit, the terms: (1) "file format," "data file format," and "data format" mean "the arrangement of digital data in a file, including, image, audio, text or other data and includes, at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD, and WAV;" (2) "image file format" means "an arrangement of digital image data in a file and includes, at least, the file formats JPEG, GIF, TIFF, PICT, MPEG, BMP, JFIF and DCF;" (3) the term "formatting said digital signal in one of a plurality of computer formats" means "arranging digital image data into one of a plurality of image file formats, including, at least, JPEG, GIF, TIFF, PICT, MPEG, BMP, JFIF and DCF," and (3) the term "output data format code" means "a code stored in the camera that corresponds to a data file format." In addition, the clarification that "computer apparatus and information handling systems and apparatus are different types within the meaning of the claims if they are loaded with different application software, even if they are otherwise the same" should be added to the constructions of the disputed phrases.<sup>4</sup>

---

<sup>3</sup> For example, in Sony, the terms "file format," "data file format," and "data format" all have the same meaning.

<sup>4</sup> Canon also contends that the term "output data format code" refers only to formats for different computer architectures. Canon's contentions are tied to a construction of the term "image file format" and a conception of the patents-in-suit neither of which has been adopted by the Court. Accordingly, the Court declines to adopt Canon's construction of

B. Whether The Claims Of The Patents-In-Suit Concern Only Still Picture Formats

1. The '459 patent, claim 16: "selecting... one of said different digital output format codes to be associated with each said digital electronic information signals"

Claim 16 of the '459 patent describes associating the images captured by the patented camera with selected "digital output format codes." Defendants suggest that the process of "selecting . . . one of said different digital output format codes to be associated with each said digital electronic information signals," refers only to the capturing and processing of still pictures in still picture formats and precludes using the stated process to capture and process in motion picture formats.

St. Clair contends that claim 16 of the '459 patent is not limited to still picture formats. St. Clair contends that the '459 patent only requires the capability to take a still picture and that the specification of the patent specifically teaches using motion picture formats.

After reviewing the parties' arguments in light of the claim language and specification of the patent, the Court concludes

---

the phrase "output data format code" and directs the parties back to the construction of "output data format code" provided by the Court in Sony, which the Court concludes is the correct construction.

that the '459 patent does not exclude storing photographs in motion picture formats. The Court's conclusion is supported by both the claim language and the specification of the '459 patent. On its face, claim 16 discloses converting analog image signals into digital information signals and recording these digital information signals in a determined format. The language of claim 16 does not limit the determined format to a still picture format. Further, the specification expressly discloses the capturing of approximately 20 images per second, rates sufficient to create a motion picture. '459 patent, col. 8, ll. 35-37. The specification also expressly discloses the use of MPEG and DVI, motion picture formats. '459 patent, col. 10, ll. 32-59.

Defendants contend that the discussion of MPEG and DVI in the '459 patent only relates to the superior compression rates offered by the formats and does not reference or incorporate the other attributes of the formats. In the Court's view, however, these formats are not mentioned solely to illustrate compression ratios. Instead, the formats are discussed as formats usable in the patented device. As the specification explains:

In the preferred embodiment of the present invention, the JPEG standard is the preferred algorithm chosen with the incorporation of the MPEG standard or other similar standard in the future when available commercially. An alternate embodiment of the present invention would be the incorporation of various proprietary compression algorithm standards such as DVI.

'459 patent, col. 10, ll. 52-59.

Additionally, the Court has previously construed the phrase "output data format code" in the Sony case without implying a limitation that the output data format code relates only to still images. Instead, the Court construed the phrase "output data format code" to include motion picture formats. Specifically, the Court construed "output data format code" to mean "a code stored in the camera that corresponds to a data file format," with the phrase "data file format" being construed to mean "the arrangement of digital data in a file, including image, audio, text or other data and includ[ing], at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD and WAV." Sony, Civ. Act. No. 01-557-JJF, order at ¶¶ 1, 4. The Court is persuaded that its claim construction of the phrase "output data format code" is correct, and therefore, the Court declines to add the still image limitation requested by Defendants.

Applying the Court's previous claim construction to the phrase at issue, the Court concludes that the phrase "selecting . . . one of said different digital output data format codes to be associated with each said digital electronic information signals" should be construed consistent with the definition of "output data format codes" and with the ordinary meaning of the terms therein. Accordingly, the Court construes "selecting . . . one of said different digital output data format codes to be associated with each said digital electronic information signals"

to mean "selecting one of said different digital output data format codes to be associated with each said digital electronic information signals where an 'output data format code' is a code stored in the camera that corresponds to a data file format and 'data file format' is the arrangement of digital data in a file, including image, audio, text or other data and including, at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD and WAV."

2. The remaining disputes regarding whether the claims of the patents-in-suit concern only still picture formats

Defendants also contend that the other claims of the patents-in-suit should be construed to require a plurality of still picture formats. Claim 1 of the '219 patent is representative of the remaining disputed claims to the extent that these claims are worded differently than claim 16 of the '459 patent. In relevant part, claim 1 of the '219 patent requires "selecting for each digitized captured image . . . one of a plurality of output data format codes," and does not describe a limitation on the type of format in which the captured image must be placed.

As discussed above, the specification common to all of the patents-in-suit does not limit the patents to the storage of images in single image formats, and, in fact, references the use of rapid photographic exposures and motion picture formats.



Therefore, the Court will not preclude motion picture formats from the purview of the '219, '010, and '899 patents and will define the format related terms of the patents-in-suit in accordance with the Court's claim construction in Sony, as described above, and without Defendants' requested restriction.

C. Whether "Camera," As Used In The Patents-In-Suit, Is Limited To A Still Camera And A Self-Contained Device

1. The '219 patent, claim 1: "in an electronic camera . . ."

The parties present two issues related to the construction of the phrase "in an electronic camera." The first issue is whether the term "camera" is limited to a "still picture" camera and the second issue is whether the term "camera" is limited to a self-contained device.

With respect to the still picture issue, Canon contends that the term "camera," as used in claim 1 of '219 patent should be construed to mean an "apparatus that takes a digital still picture (not movie)." (D.I. 426 at 18.) Canon contends that the '219 patent, as described in its specification, clearly relates only to still cameras.

St. Clair contends that the patent only requires that the camera be capable of taking still pictures. (D.I. 519 at 25.) In other words, St. Clair contends that a camera with both motion picture and still image capabilities is within the scope of the '219 patent.

Reviewing the parties' arguments in light of the claim language and specification of the '219 patent, the Court concludes that the term "electronic camera" is not limited to a camera with only still picture capabilities. Rather, the only requirement imposed by the '219 patent is that the camera be capable of taking still pictures and the camera's capability for motion pictures does not preclude it from the scope of the patent. The Court's conclusions are supported by both the language of the claim and the specification of the '219 patent. As the Court previously discussed, neither the specification nor the language of the claims imposes a still picture limitation on the patented invention and the specification expressly contemplates the camera's capability to take both still and motion pictures. The specification discusses taking approximately 20 images in a one second period and using formats reserved for motion pictures. Accordingly, the Court declines to limit the term "camera" in the manner proposed by Canon.

With respect to the second issue, concerning whether the phrase "in an electronic camera" is limited to a self-contained device, St. Clair contends that the Court should construe the phrase "[i]n an electronic camera" as "in a self-contained portable electronic camera the components of which are contained in a single housing." (D.I. 427.) In support of its contention, St. Clair contends that the ordinary meaning of the word "camera"

relates to a device that is self-contained in a single housing, and that this ordinary meaning is not altered by the claim language or the specification of the patent.

In response, Canon contends that the word "camera," as used in the '219 patent, can describe a self-contained device in a single housing, but it is not required to be construed as a self-contained device. Canon contends that to hold otherwise would ignore the plain meaning of the patent and read out two of its preferred embodiments. Further, Canon contends that, under the standard announced in Microsoft v. Multi-Tech Systems, Inc., 357 F.3d 1340 (Fed. Cir. 2004), the failure to include a limitation related to the camera housing in the patent indicates an intent not to incorporate such a limitation. Canon requests the Court to construe "camera" to mean, in relevant part, "an apparatus, which is self-contained or formed of several physically separate parts that can be connected to one another."

The Court concludes that the term "camera" should be construed in accordance with its plain meaning to be a self-contained device in a single housing unit. The ordinary, dictionary definition of camera is "a lightproof box fitted with a lens through the aperture of which the image of an object is recorded on a light-sensitive material." (D.I. 486, Ex. 32.) The Court finds this definition relates to a self-contained device in a single housing.

Canon contends, however, that the Court should not rely on the ordinary meaning of the term "camera" as a self-contained device, because the claims concern "digital cameras." In the context of digital cameras, Canon contends that the term "camera" would not relate only to a self-contained camera. By way of example, Canon directs the Court to prior art digital cameras that were not self-contained, such as the Tessera 2K and Dycam Model 1. (See D.I. 494 at ¶¶ 10-15.)

The fact that digital cameras existed which were not self-contained does not, in the Court's view, mean that the Court should depart from the ordinary and plain meaning of the word "camera" as a self-contained unit. Stated another way, Canon has demonstrated that there are digital cameras with physically separate components, but Cannon has not established that the patentees in this case intended to depart from the general usage of the term "camera."

As for Canon's reliance on the Microsoft decision that the term "camera" must include devices with physically separate parts unless the patent claims or specification detail their exclusion, the Court concludes that the facts of Microsoft are distinguishable from the facts in this case. In Microsoft, the Federal Circuit held that a patent disclosing a "speaker phone" did not limit the described "speaker phone" to a particular physical housing. In reaching this conclusion, the Federal

Circuit pointed out that the patent referred to the component parts of the speaker phone, a microphone and a speaker, as distinct parts. Unlike Microsoft, here the component parts of the patented device are not parts that are ordinarily independent and are not repeatedly described in the patent as independent parts. Compare United States Patent No. 5,764,627, claim 2 (describing the claimed speaker phone as a "deskset microphone operable for receiving the local analog voice signals and a deskset speaker operable for playing the remote analog voice signals") with the '219 patent, claim 16 (describing the claimed camera as comprised of a shutter mechanism, an array of discrete light sensing pixel elements, a pixel multiplexing means, an analog to digital converter means, a memory means, an output data control means, and a logic means).

Canon also contends that the ordinary meaning of the term "camera" to mean a self-contained device should not be used, because such a definition would exclude the preferred embodiments described in the patent. Specifically, Canon directs the Court to two embodiments described in the specification, one relating to external control and processing and the other relating to external activation, and contends that these preferred embodiments must include separate physical components.

Considering the preferred embodiments in the context of the patent, the Court is not persuaded by Canon's argument. In the

first disputed embodiment, the specification discloses an alternative embodiment that adds an auxiliary input/output interface to allow external control and monitor of timing and control signals internal to the camera. According to the specification, this auxiliary interface also allows image data to be "routed past or around the compression processor out to any additional internal or external device." '219 patent, col. 9, ll. 5-9. Although this embodiment references external features that are separate components, these external features are offered in addition to the features of the single camera body. Stated another way, the auxiliary input/output channel describes the possible outward expansion of the camera's internal capabilities, but it is not a substitute for the camera's internal processing capabilities. As Figure 7 of the specification illustrates, the camera still contains all of the internal circuits that allow processing within the camera. As such, the external components are not clearly part of the described "camera," and the use of external components in this preferred embodiment does not demonstrate that the inventors disavowed the plain meaning of the term "camera" as a single housing unit.

The Court's reasoning is the same with respect to Canon's reference to the second preferred embodiment, the external activation described in the specification of the '219 patent. The described external activation is not integral or exclusive to

the described "camera," and therefore, in the Court's view, it does not require the Court to depart from the common usage of the word "camera."

The conclusion that the inventors did not depart from this common meaning and usage of the word "camera" is further supported by references within the specification and the file history that demonstrate the inventors sought to create a portable, self-contained unit in a single housing. For example, the stated objective of the invention is to "provide an electronic still camera that is efficient in design and permits extended periods of portable operation." '219 patent, col. 2, ll. 59-61. As described in the prosecution history of the related '459 patent, "[t]he principle advantages of Applicants' claimed improved electronic still camera" as "a less costly, more compact and more efficient design." (See, e.g., D.I. 521, Ex. 69 at St. Clair 00083.) In the Court's view, these statements take on particular significance when one considers that "cameras" involving a multiple of separate parts and a separate computer were well-known in the prior art. Indeed, during the prosecution of the '219 patent, the inventors of the claimed invention sought to expressly distinguish the prior art by stating that "[t]he claimed device instead stores a plurality of computer-ready digitized images on removable mass memory in the device housing." (See D.I. 486, Ex. 34 at St. Clair 01433 (emphasis added); see

generally D.I. 486, Ex. 35.)

In sum, the Court will adopt the ordinary meaning of the term "camera" as it relates to camera structure. In addition, the Court has previously determined that the term "camera" is not limited to a device which takes only still pictures. Accordingly, the Court construes the term "camera" to mean "a self-contained, portable electronic camera, with the capability to take still pictures, the components of which are contained in a single housing." Thus, the Court concludes the phrase "[i]n an electronic camera," as used in claim 1 of the '219 patent, means "in a self-contained, portable electronic camera, with the capability to take still pictures, the components of which are contained in a single housing."

2. The remaining disputes regarding whether the claims of the patents-in-suit are limited to still cameras and self-contained cameras

The parties' dispute over the use of the term "camera" in claim 1 of the '219 patent is representative of the parties' dispute over the use of that term in the remaining patent claims, including the preambles.<sup>5</sup> Thus, the Court concludes that the

---

<sup>5</sup> Although the preamble of claim 16 of the '459 patent does not use the word "camera," the parties focused their respective arguments to this claim. The Court understands that the parties agree that the phrase "in an electronic camera" is implicit in the claimed "process for storing an electronically sensed video image." Thus, the Court concludes that the preamble of claim 16 should also be construed consistently with the Court's definition of the term "camera" so that the preamble of claim 16 is not limited to still pictures. The Court concludes the phrase "[a]



remaining patent claims which use the term "camera" will be construed in accordance with the interpretation discussed above.

D. Means-Plus-Function Terms

Means-plus-function limitations are governed by 35 U.S.C. § 112, ¶ 6. In pertinent part, Section 112, ¶ 6 provides:

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

Although use of means-plus-function language in a claim is permissible, a means clause does not encompass every means for performing the specified function. The Laitram Corporation v. Rexnord, 939 F.2d 1533, 1535 (Fed. Cir. 1991). Rather, the limitation must be construed "to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." Odetics, Inc. v. Storage Technology Corp., 1999 WL 455530, \*4 (Fed. Cir. July 6, 1999).

In determining whether a claim element is subject to Section 112, ¶ 6, a court considers the phrasing of the element. The word "means" creates a presumption that Section 112, ¶ 6 applies, and its absence creates a presumption to the contrary. "In

---

process for storing an electronically sensed video image" means "a process for storing an electronically sensed video image in a self-contained, portable electronic camera, with the capability to take still pictures, the components of which are contained in a single housing."

deciding whether either presumption has been rebutted, the focus [is] on whether the claim as properly construed recites sufficiently definite structure to avoid the ambit of § 112, ¶ 6." Personalized Media Communications, LLC v. International Trade Comm'n, 161 F.3d 696, 704 (Fed. Cir. 1998).

1. Terms relating to the charged couple devices
  - a. The '219 patent, claim 10: "means for capturing image data corresponding to a selected image"

Although the parties dispute the meaning of the phrase, the parties agree that "means for capturing image data corresponding to a selected image" is a means-plus-function element. St. Clair contends that the function performed by the "means for capturing image data corresponding to a selected image" is "capturing image data corresponding to a selected image." (D.I. 486, Ex. 21 at 40-41.) St. Clair contends that the structures corresponding to this function are "electro-optical sensors including Charge Coupled Device (CCD), C-MOS sensor, Infrared Sensor (IR), Ultra-Violet sensor (UV), and equivalents thereof." (Id.)

Canon contends that the disclosed function of the disputed phrase is "to generate and output digital still image data for a still picture." (Id.) Canon contends that the structures corresponding to this function are:

a lens to collect light; an electronic shutter that controls a charge storage time on a CCD array (1); a CCD array (1) ('or an Infrared (IR) or Ultraviolet (UV) sensor') that outputs analog still image data for a

still picture; a pixel multiplexer (7) that is connected to the CCD array (1) and which separates the outputs of each array of pixel elements from the CCD array (1) into three primary color components (red, green and blue), putting each of the three red, green, and blue color component outputs into its own channel; three S/H circuits (18) that each take a primary color component analog still image data output from one of the three channels from the pixel multiplexer.

(D.I. 496, Ex. 8, tab 1 at 40.) Canon contends that the construction of this phrase should not include the C-MOS image sensors included in St. Clair's construction, because such sensors were not disclosed in the '219 patent. Canon also contends that St. Clair's proposed function and structure is too general.

The Court has addressed the parties' contentions regarding whether the patented claims are directed only to still images and has concluded that they are not. Thus, the Court cannot accept Canon's proposed construction to the extent that it incorporates a still image limitation. The Court concludes that St. Clair's construction of the phrase is supported by both the claim language and specification of the patent. As the plain language of the claim makes clear, the function corresponding to "means for capturing image data corresponding to a selected image" is "capturing image data corresponding to a selected image." Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1322 (Fed. Cir. 2003) (recognizing the importance of relying on the claim language to state the function and stating that care must be taken to avoid

limiting the function by adopting a function which is different from that which is explicitly recited in the claim).

With regard to the structures corresponding to this function, the Court likewise concludes that the structures identified by St. Clair are correct. Examining the specification of the '219 patent, the Court concludes that the structures listed by Canon are not necessary for the function of "capturing image data corresponding to a selected image." See Northrup Grumman Corp. v. Intel Corp., 325 F.3d 1346, 1352 (Fed. Cir. 2003) (stating that "[a] court may not import into the claim, features that are unnecessary to perform the claimed function"). Rather, the '219 patent describes an invention that is capable of taking a still picture by "utilizing a variety of electro-optical sensors including Charge Coupled Devices (CCD), Infrared (IR), and Ultra Violet (UV). . . ." '219 patent, col. 2, ll. 42-44,; col. 3, ll. 62-67. The '219 patent also describes the use of "C-MOS" in capturing image data, and therefore, C-MOS is appropriately included in the corresponding structure. Id. at col. 7, l. 65 - col. 8, l.2. Accordingly, the Court concludes that the function of "capturing image data corresponding to a selected image" is performed by the corresponding structure of electro-optical sensors including Charge Coupled Device (CCD), C-MOS sensor, Infrared Sensor (IR), and Ultra-Violet sensor (UV), and equivalents thereof.

- b. The '219 patent, claim 16: "an array of discrete light sensing pixel elements, each pixel element being responsive to incident illumination from a subject image radiating through said lens and shutter means to generate an analog picture information signal corresponding to said subject image"

The parties dispute whether the phrase "an array of discrete light sensing pixel elements, each pixel element being responsive to incident illumination from a subject image radiating through said lens and shutter means to generate an analog picture information signal corresponding to said subject image" of claim 16 of the '219 patent is in means-plus-function form. St. Clair contends that this phrase is not governed by Section 112, and that its ordinary and plain meaning should be applied. Defendants contend that this phrase is in means-plus-function format, because it recites a function without a definite structure. Specifically, Defendants contend that the use of the word "elements" is generic and points to no definite structure.

The disputed phrase does not contain the word "means," and therefore, there is presumption that Section 112, ¶ 6 does not apply. Personalized Media Communications, 161 F.3d at 704-704. However, this presumption can be "rebutted by showing that the claim element recite[s] a function without reciting sufficient structure for performing that function." Watts v. XL Systems, Inc., 232 F.3d 877, 881 (Fed. Cir. 2000) (citing Rodime PLC v. Seagate Tech., Inc., 174 F.3d 1294, 1302 (Fed. Cir. 1999). In

determining whether the presumption is rebutted, courts examine whether "the term, as the name for structure, has a reasonably well understood meaning in the art." Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996).

Referring to expert testimony, Defendants contend that the term "elements" is generic and has no structural definition. (D.I. 517 at 12.) However, in the instant claim element, the disputed term is, more specifically, "light sensing pixel elements." See Personalized Media Communications, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 704-705 (Fed. Cir. 1998) (discussing the effect of narrowing modifiers). For this reason, the Court concludes that the term "elements" is not used generically, and the disputed claim element describes a sufficient structure such that it is not in means-plus-function format. Accordingly, the Court will not adopt the construction proposed by Defendants. The Court concludes that "array of discrete light sensing pixel elements" should be construed in accordance with its ordinary meaning as "an array of discrete light sensing pixel elements, including, at least, Charge Coupled Device (CCD), C-MOS sensor, Infrared sensor (IR), and Ultra-Violet sensor (UV)."

- c. The '010 patent, claim 1: "an image pick-up unit for generating and outputting a digital image signal photoelectrically converted from an image incident thereon;" the '899 patent, claims 1 and 3: "image pick-up unit"

Claim 1 of the '010 patent and claims 1 and 3 of the '899

patent each describe an "image pick-up unit." The parties dispute whether each use of this term is in means-plus-function format. St. Clair contends that the term "image pick-up unit" should be understood as the definite structure of an image sensor, and is further defined by the surrounding claim terms. Canon contends that the word "unit" is generic and does not describe a definite structure such that the claim should be construed as a means-plus-function claim.

Like the previously construed phrases, the phrases using the term "image pick-up unit" do not use the term "means," and therefore, the presumption that the phrases are not in means-plus-function format applies. However, the Court concludes Canon has not overcome the presumption. The claims describe a definite structure, an "image pick-up unit," and do not recite a function that is detached from this structure or beyond the capabilities of this structure. Thus, the Court concludes that the term "image pick-up unit," as used in the disputed phrases, does not require a means-plus-function construction.

Canon has not provided the Court with an alternate construction that does not utilize a means-plus-format construction and has not expressed disagreement with St. Clair's proposed construction of this phrase, other than its contention that the claim should be construed in means-plus-function form. Accordingly, the Court concludes that the phrase "image pick-up

unit" is appropriately defined as "an image sensor, such as Charge Coupled Device (CCD), C-MOS sensor, infrared sensor (IR), Ultra-Violate sensor (UV), alone or in combination with an analog digital converter(s)." See '010 patent, col. 1, ll. 34-38; col. 2, ll. 41-46; col. 3, l. 63 - col. 4, l. 1; col. 4, ll. 4-7; col. 4, l. 16; col. 6, l. 57 - col. 7. l. 1; col. 7, l. 65 - col. 8, l. 7.

2. Terms describing an analog to digital converter

- a. The '219 patent, claims 1 and 10: "means for digitizing captured image data"

The parties agree that "means for digitizing captured image data" is in means-plus-function form. St. Clair contends that the phrase "means for digitizing captured image data" performs the function of "digitizing captured image data" and the corresponding structure to the function is "analog to digital converter(s), and equivalents thereof." (See D.I. 486, Ex. 21 at 41.)

Canon contends that the disputed phrase corresponds to the function "to generate and output digital still image data for a still picture." (D.I. 496, Ex. 8, Tab 1 at 29.) Canon contends that the corresponding structure should be:

a lens to collect light, an electronic shutter that controls a charge storage time on a CCD array (1); a CCD array ('or an Infrared (IR) or Ultraviolet (UV) sensor') that outputs analog still image data for a still picture; a pixel multiplexer (7) that is connected to the CCD array (1) and which separates the outputs of each array of pixel elements from the CCD



array (1) into three primary color components (red, green and blue), putting each of the three red, green and blue color component outputs into its own channel; three S/H circuits (18) that each take a primary color component analog still image data output from one of the three channels from the pixel multiplexer (7) and passes it to one of three A/D converters (8); and three A/D converters (8) working in parallel, each of which takes an output from a S/H circuit (18) and converts the analog still image data to digital still image data for a still picture

for claim 1 of the '219 patent and a more limited variation thereof for claim 10 of the patent. (Id. at 29-30.) Fuji argues similar contentions.

As to the described function, the Court has addressed the parties' contentions regarding still images and has concluded that the claimed invention is not limited to still images. Thus, the Court cannot accept Canon's proposed construction to the extent that it incorporates a still image limitation. Further, the Court concludes that St. Clair's construction of the phrase is correct and is supported by both the claim language and specification of the patent. As the plain language of the claim makes clear, the function corresponding to the "means for digitizing captured image data" is "digitizing captured image data." See Raytek Corp., 334 F.3d at 1322 (recognizing importance of relying on claim language to state function and stating that care must be taken to avoid limiting the function by adopting a function which is different from that which is explicitly recited in the claim).

As for the corresponding structure, the Court concludes that the structures recited by Defendants are not necessary for the stated function of digitizing captured image data. An analog to digital converter is all that the specification requires to perform the function of digitizing captured image data. '219 patent, col. 7, ln. 8-9 (stating that "[t]he analog voltage in each S/H circuit is digitized by an associated analog to digital (A/D) converter"); col. 7, ln. 32-35.

To the extent that Defendants contend that three analog digital converters are required to perform the recited function, the Court disagrees. The specification expressly discloses that the function of digitizing captured data can be performed with a single analog to digital converter operating along a singular, serial path. See the '219 patent, col. 7, ll. 52-53; col. 7, l. 62-66. Accordingly, the Court concludes that the function of "digitizing captured image data" is performed by analog to digital converter(s), and equivalents thereof.

- b. The '219 patent, claim 16: "analog to digital converter means for converting said analog picture information signal into corresponding digital data information signals"

The parties dispute whether the phrase "analog to digital converter means for converting said analog picture information signal into corresponding digital data information signals" is in means-plus-function format. Canon contends that the disputed phrase requires a means-plus-function construction. Canon

contends that the phrase uses the term "means," and therefore the presumption that it is a means-plus-function claim applies.

Canon also contends that the presumption is not rebutted, because the disputed phrase recites a function without reciting or describing a definite structure.

St. Clair contends that the presumption that the phrase is in means-plus-function format is rebutted, because the structure of an analog digital converter is a structure well known in the art. Thus, St. Clair contends that the "analog to digital converter means" is "analog to digital converter(s)."

Although the disputed phrase contains the word "means," and is presumed to be governed by Section 112, ¶ 6, the Court concludes that the "analog to digital converter means" should not be construed as a means-plus-function term. An analog to digital converter is a sufficient structure to perform the described function, and therefore, additional structures do not need to be imported from the specification. See Rodime, 174 F.3d at 1302. Accordingly, the Court concludes that the "analog to digital converter means" is "analog to digital converter(s)."

### 3. Memory terms

- a. The '219 patent, claim 10: "removably mounted memory means for storing digitized image data"

The parties disagree on whether "removably mounted memory means for storing digitized image data," as used in claim 10 of

the '219 patent, is in means-plus-function form. St. Clair contends that the term "memory" is a definite, known structure, and therefore, the claim is not in means-plus-function format. Defendants contend that this claim element is phrased using the word "means" such that 35 U.S.C. § 112, ¶ 6 is implicated, and that this element does not recite a structure sufficient to rebut the presumption created by the use of the word "means." In their contentions and proposed constructions, Defendants focus on determining the structure of the "memory" and not the structure required to removably mount this memory.

After reviewing the claim language and the specification in light of the parties' respective positions, the Court concludes that "removably mounted memory means," as used in claim 10 of the '219 patent, is not in means-plus-function form. As the surrounding claim language indicates, the "memory means" is removably mounted in a camera body and must store digitized image data. In this context, "memory means," or "memory," would be understood by one skilled in the art as a definite structure. This recited structure is capable of performing the described function, and therefore "memory means" is not a means-plus-function term.<sup>6</sup>

---

<sup>6</sup> This understanding of "memory" is further evidenced by the Microsoft Press Computer Dictionary, which, as early as 1991, defined "memory" in terms of a structure as "[c]ircuitry that allows information to be stored and retrieved." (D.I. 486, Ex. 28.)

Defendants contend that, in prosecuting another, related patent, the inventors represented to the PTO that the disputed phrase is in means-plus-function format, and that the term must be similarly construed in the instant patent. The Court finds that the prosecution history cited by Defendants does not prove a representation that "memory means" is in means-plus-function form.

The relevant representations discuss the PTO's rejection of a claim for "removably mounted memory means" as a term without structure. In attempting to overcome this rejection, the inventors stated that the term should be properly construed to "cover the structure and function as fully described in the specification, and drawing and any equivalents thereof, as required by the statute and relevant case law precedents." (D.I. 498, Ex. 30, tab E at 10-11.) The Court does not understand that the inventors referenced the specification in their response to the PTO in order to disclose the structure for the term "memory." Rather, the Court finds the inventors were referencing the specification to disclose the structure of the mounting of the memory means. The inventors clarified that "'removable mounted memory means' . . . accurately describes that memory means of the applicants' improved electronic video camera in which the video or picture data is selectively formatted and recorded in the camera to facilitate removal of such memory means for insertion

into the predetermined type of information handling apparatus for which the output data format code data was selected." (Id.) Further demonstrating that their discussion was directed to the "mounting means," the inventors indicated that they had amended the claim language to add "means for removably mounting" "to more particularly point out and claim that element of their improved camera." (Id.) Thus, the Court finds that when the inventors proposed a means-plus-function construction for this phrase, they were discussing the mounting means, rather than the memory means, and therefore, the Court cannot agree with Defendants' argument that the inventors intended a means-plus-function construction of the term "memory means."<sup>7</sup>

Defendants also direct the Court to two cases which they contend support their argument that "memory means" is a means-plus-function element. In the first, Intel Corp. v. Broadcom Corp., 172 F. Supp. 2d 515 (D. Del. 2001), the court examined "memory means" as part of the larger phrase "an I/O port for coupling said integrated circuit to memory means." Id. at 544. In Intel, the court did not analyze or state whether the claimed "memory means" was a means-plus-function term. Id. at 544-555.

---

<sup>7</sup> Although the amendment proposed by the applicants was never incorporated into the final claim language, it is relevant to demonstrate that, taken in the proper context, the remarks relied upon by Defendants do not support the proposition that the applicants sought a means-plus-function construction for the memory means.

Further, it is not entirely clear to the Court that the Intel court defined "memory means" as a means-plus-function term. Rather, the Court finds the Intel court distinguished the term "memory means" from the structure of the preferred embodiment in the patent specification and concluded that the term should not be defined by reference to the specification or limited in the manner proposed by the defendant. Id. (stating that "'memory means' cannot be limited to the specific dual-mode VRAM that was used to describe the preferred embodiment, because the patentees did not claim 'a dual mode VRAM[;]'" and noting that "[t]he patentee claimed a generic 'memory means'"). Instead, the Intel court concluded that the term "memory means" should be afforded its ordinary meaning in the art as "memory or device where information can be stored and retrieved." Id. (citing Microsoft Computer Dictionary 285 (4th ed. 1999)).

In the second case, Genlyte Thomas Group v. Lutron Elecs. Co., 2004 WL 690847 (N.D. Tex. Mar. 31, 2004), the court did conclude that "memory means," as it appeared in a patent for lighting control, was in means-plus-function form. However, the circumstances involved in the Genlyte case are distinguishable from the instant case. Id.

In Genlyte, the Court found that "memory means" was in means-plus-function form because the specification gave "a detailed description of the structure used to carry out the

function.” Id. at \*11. In contrast, the specification in the instant patent does not provide a detailed structure of memory such that “memory means” should be considered to be a means-plus-function phrase requiring construction by reference to the specification. Rather, in the Court’s view, the plain language of the claim and the lack of detail in the specification support the Court’s conclusion that the term “memory” is a sufficient structure such that the presumption of means-plus-function format is overcome and the term “memory means” should be afforded its ordinary meaning as a non-means-plus-function element.

Having concluded that “removably mounted memory means” is not in means-plus-function form and its structure is not determined by reference to the patent specification, the Court must construe the term. Defendants contend that, if the term is not construed as a means-plus-function claim, that the interpretation of the term should still be limited to only certain types of memory. Fuji contends that these include “a memory diskette (i.e. a floppy disk) such as a double density or high density diskette.” (D.I. 496, exhibit 8, tab 1 at 42.) Canon contends that the memory must be a removable magnetic diskette, not to include “(a) solid state memory devices such as removable memory cards or bubble memory, (b) memory devices that work with a playback device, reproducing unit or interface (such as an interface board or memory card interface), (c) memory



devices that work with a tether such as a cable, or (d) memory devices that require use of driver software (except for floppy diskette driver software).” (Id.)

St. Clair contends that the ordinary meaning of memory should be used in defining the disputed term. St. Clair contends that “removably mounted memory means” is “removably mounted memory: removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory.” (D.I. 486, Ex. 21 at 42.)

After reviewing the claim language, specification, and prosecution history of the '219 patent, the Court concludes that “removably mounted memory means” should be construed according to its ordinary and customary meaning as “removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory.” The Court concludes that this meaning is supported by the claim language and is not contradicted by the specification or prosecution history. The language of claim 10 does not restrict or limit itself to a specific type of memory and uses the broad term “removably mounted memory means.” Thus, the Court finds the language of claim 10 does not support Defendants' construction which would improperly limit the claimed term to a 3.5 inch diskette.

Defendants contend that the specification of the '219 patent discloses that the inventors attempted to "make direct use of data files in computers without any readers or adapters," and that this solution required a certain kind of memory. (D.I. 495 at 25.) Canon cites a section of the invention's background which describes the invention's possible use of a digital diskette that can be directly inserted into a personal computer. Canon also cites a section of the specification detailing that the object of the invention is to provide for recording on standard removable magnetic diskettes and that the invention also provides for the direct and immediate incorporation of digital image files into various software programs.

Although the specification clearly discloses the use of magnetic diskettes, the Court is not persuaded the specification limits the patent to such devices. The descriptions of magnetic diskettes in the specification are offered as examples and do not imply exclusivity or limit the scope of the patent. Further, the specification describes the option to use, in the patented cameras, "a diskette such as a standard three and a half inch or similar storage medium." '219 patent, col. 6, l. 24-26 (emphasis added). The specification goes on to provide a variety of examples of memory for use with the invention, including but not limited to RAM, ROM, semiconductor memory, and optical disk. '219 patent, col. 9, l. 22; col. 6, l. 10, 25; col. 9, l. 8; col.

1, 11. 43-46. Therefore, read in full, the specification does not indicate an intent to deviate from the ordinary meaning of "memory" or to limit that term to only three and a half inch diskettes. See Teleflex, Inc. v. Ficos N. Am. Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002) (stating that a "patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope").

Defendants also direct the Court to the prosecution history of the '219 patent, during which the inventors made several statements distinguishing their cameras from prior art devices. For example, the inventors stated that "Kawahara et al. teaches a digital camera for use with a dedicated, single purpose playback device" and that "the only reasonable combination of the teachings of Kawahara et al. and Eikonix, if any, is the use of a removable memory card for playback on a PC via an interface." (D.I. 498, Ex. 30 at 3.) It is clear that, when prosecuting the '219 and related patents, the inventors attempted to distinguish their technology from the prior art; however, in the Court's view, they did not disavow various types of memory devices by distinguishing the prior art. Instead, the prosecution history reveals that the inventors distinguished their invention based on the prior art's failure to take advantage of removable memory and

the prior art's use of computers and dedicated playback devices to format image data. (D.I. 49, Ex. 30 at 3; D.I. 521, Ex. 83.) For example, in discussing the "teachings of Kawahara et al. and Eikonix," the inventors do not disavow or distinguish all memory cards. Instead they distinguish "the use of a removable memory card for playback on a PC via an interface." (D.I. 498, exhibit 30 at 3.) The other statements in the prosecution history are likewise distinguishable. Thus, the Court finds the sections of the prosecution history cited by Defendants do not evidence a disavowal of various types of memory. Indeed, in the prosecution history of another, related patent, the inventors make it clear that they did not intend to limit the "memory means" to a certain type of diskette, but intended the term to embrace other examples of memory. Specifically, the inventors explained:

While diskette 50 is disclosed in applicants' specification as a 3.5 inch floppy disk, applicant' independent claims are not limited to the format checking and/or formatting of any particular type of digital memory. Applicants' claims as written would thus cover format checking and/or formatting of any memory device in a camera, including but not limited to 3.5 inch floppy disks, hard disks, optical disks, minidisks, semiconductor memory cards, etc. Although as discussed below the Examiner's position relied in part on the asserted use of a 3.5 inch floppy disk in a camera, applicants' claims should not be deemed so limited.

(D.I. 498, Ex. 30, tab F at 3 (08/712, 493 Appeal Brief, 1/7/99) (emphasis added).

In sum, "removably mounted memory means" is not in means-

plus-function form and is construed according to its ordinary and customary meaning. Therefore, the Court concludes "removably mounted memory means" means "removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

b. Other claims describing memory

Several of other claims of the patents-in-suit also contain terms related to memory. The parties contend that these terms should be construed similarly to "removably mounted memory means," as claimed in claim 10 of the '219 patent and discussed above. For the same reasons the Court concluded that "removably mounted memory means," as used in claim 10 of the '219 patent, is not a means-plus-function term and should be construed according to its ordinary meaning, the Court reaches the same conclusion for the remaining disputed memory terms. Therefore, the Court concludes (1) "removably mounted memory means," as used in claim 10 of the '219 patent, means "removably memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory;" (2) "memory element," as used in claim 1 of the '219 patent, means "memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory;" (3) "wherein said memory element comprises a removably mounted digital disk," as used in claim 3

of the '219 patent, means "removable digital disk, e.g. floppy disks, optical disks, and magnetic disks;" (4) "selectable addressable memory means," as used in claim 16 of the '459 patent, means "selectable addressable memory;" (5) "memory means," as used in claims 16 of the '219 patent, means "any digital memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory;" (6) "wherein said memory means comprises digital data means having a plurality of addressable sections for storing said digital data information signals," as used in claim 18 of the '219 patent, means "wherein said memory means comprises digital data means having a plurality of addressable sections for storing said digital data information signals;" (7) "removable storage device," as used in claim 1 of the '010 patent, means "removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory;" (8) "storage device," as used in claims 1 and 3 of the '899 patent, means "any memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory;" 9) "digital memory," as used in claim 16 of the '459 patent, means "any digital memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

4. Output data control terms

- a. The '219 patent, claim 1: "output data control means"

Claim 1 of the '219 patent describes an "output data control means for selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image." The parties dispute whether "output data control means," as used in this phrase is in means-plus-function form.

St. Clair contends that "output data control means" should be understood to refer to the structure of a "controller." St. Clair contends that this structure is understood in the art, and its use does not implicate 35 U.S.C. § 112, ¶ 6.

Defendants contend that "output data control means" would not be understood to recite a structure. Defendants contend that the disputed term is presumed to be governed by 35 U.S.C. § 112, ¶ 6, and is in means-plus-function form. Defendants contend that St. Clair's proposed synonym, "controller," is a different word from the claim term and, in any case, is equally vague.

The disputed phrase describes a "means for" a stated function and is therefore presumed to be in means-plus-function form. Further, although a "controller" may be a sufficiently definite structure, the Court does not conclude that the term "output data control means" is necessarily equivalent to the

structure of "controller." In the Court's view, the disputed term does not recite a sufficient structure and is in means-plus-function form. Therefore its corresponding function and structure must be determined.

St. Clair contends that should "output data control means" be construed as a means-plus-function term, the corresponding function is "selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image" and the corresponding structure is "a microprocessor programmed to perform the recited function of selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image, and equivalents thereof." (D.I. 486, Ex. 21 at 31-32.) Canon contends that the function is "to select a two-bit data code (57) that is prerecorded in the camera" and the structure is:

a manual switch (17), logic gates (60c and 60d) and a related circuit that selects one of three, two-bit data codes (57) that are prerecorded in the camera. Each two-bit data code (57) is associated with the digital still image data for each still picture. Each of the two bit data codes (57) corresponds to one of three different still image file formats ("file formats" means "the arrangement of digital data in a file"). Each format is for a different type of incompatible computer architecture (i.e., "format for [] the IBM



Personal Computer and related architectures[, ] the Apple Macintosh PC architecture" and one other architecture). Because of representations made in the prosecution history, the still image file format cannot include still image file formats that, in order to view the picture, require any conversion by a computer or changing by a computer to conform to a particular computer. Because of actions taken in the prosecution history, the term "different types of computer apparatus" cannot mean computer apparatus that differ only in the computer programs they contain.

(Id.)

After reviewing and considering the claim language, the specification and the parties' respective arguments, the Court concludes that St. Clair's construction is the more appropriate construction. Accordingly, the Court concludes that the function of the disputed phrase is "selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image."

With regard to the corresponding structure, Canon reiterates several contentions which have previously been addressed by the Court, including its arguments concerning still pictures and computer architecture. For the reasons discussed previously, the Court does not agree with Canon's positions with respect to these issues. Further, the Court concludes that the remaining structures identified by Canon are unnecessary to performing the described function. Rather, the specification describes a

microprocessor that allows the proper control of the patented device. '219 patent, col. 8, ll. 31-39. Accordingly, the Court concludes that a microprocessor programmed to perform the recited function of selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image, and equivalents thereof is the structure corresponding to the function performed by the "output data control means."

- b. Other claims with "output data control means" or "output data format control means"

The terms "output data control means" or "output data format control means" also appear in claims 1, 10, and 16 of the '219 patent. Although the terms used in describing the functions of these terms vary, they describe functions similar to the function of claim 1 of the '219 patent, as described above, and share the same specification. Therefore, these terms should be construed consistently. Accordingly, "output data control means" and "output data format control means," as used in claims 1, 10, and 16 of the '219 patent are means-plus-function elements which perform the function described in each claim and the corresponding structures are microprocessors programmed to perform the functions recited in each claim.

5. Logic terms

- a. The '219 patent, claim 1: "logic means"

Claim 1 of the '219 patent describes "logic means responsive to said output data control means for determining an output data format for each digitized captured image in accordance with the assigned output data format code." The parties dispute whether this term is in means-plus-function form.

St. Clair contends that "logic means" describes a structure of circuitry or a set of instructions. St. Clair contends that, at the filing of the patents-in-suit, a "logic circuit" had a known structural definition, rebutting the presumption that 35 U.S.C. § 112, ¶ 6 applies.

Defendants contend that the use of the word "means" in the disputed term creates a presumption that the term is in means-plus-function form. Defendants contend that the disputed term is not "logic circuit," and does not reference the structure of a logic circuit.

After reviewing and considering the claim language and specification of the '219 patent in light of the parties' respective arguments, the Court concludes that "logic means," as used in claim 1 of the '219 patent, is not in means-plus-function form. Claim 1 describes a responsive "logic means" for determining an output data format data code in a digital camera. In this context, "logic means" clearly refers to a logic circuit, a structure sufficient to perform the described function. See Ex. 27, Van Nostrand Reinhold Dictionary of Information

Technology 307 (3d ed. 1989) (defining "logic circuit" as "in electronics, a circuit comprising one or more gates or flip flops that performs a particular logic function"). Because a sufficient structure is recited, the presumption that Section 112, ¶ 6 applies as a result of the use of the term "means" is rebutted. Accordingly, the Court concludes that the term "logic means" must be interpreted according to its ordinary meaning as "circuitry and/or a set of instructions."

b. The remaining phrases using the term "logic means"

The term "logic means" is also used claims 10 and 16 of the '219 patent. The use of "logic means" in these claims is consistent with its use in claim 1 of the '219 patent. Therefore, the Court concludes that "logic means," as used in the remaining claims, is not in means-plus-function form and should be accorded its ordinary meaning of "circuitry and/or a set of instructions."

6. The '010 patent, claim 1: "digital control unit"

The '010 patent describes a "digital control unit for formatting said digital image signal in one of a plurality of computer formats." The parties dispute whether this phrase is in means-plus-function form. St. Clair contends that 35 U.S.C. § 112, ¶ 6 is presumed to not apply to the term "digital control unit" and that a "digital control unit" is a sufficient structure. Canon contends that a digital control unit has the

same meaning as "memory means" and does not describe a clear structure.

The disputed claim term does not use the word "means," and therefore, it is presumed not to be a means-plus-function term. This presumption can be rebutted if the claim describes a function and does not describe sufficient structure to perform that function. See CCS fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1369 (Fed. Cir. 2002). The Court concludes that a "digital control unit" is a sufficient structure "for formatting said digital image signal in one of a plurality of computer formats," and therefore a means-plus-format construction of the phrase is not required.

To the extent that the parties request the Court to construe this phrase, the Court concludes that the phrase "digital control unit" means "a microprocessor alone or in combination with circuits under control of the microprocessor." This construction is consistent with the specification including the preferred embodiment which describes an example of the digital control unit. See the '010 patent, col. 4, l. 1 - col. 5, l. 8.

7. Compression terms

- a. The '219 patent, claim 2: "picture image resolution determining means"

Claim 2 of the '219 patent describes a "picture image resolution determining means for selectively determining which of a plurality of compression algorithm parameters are to be applied

to said digitized captured image." Although the parties dispute the meaning of this phrase, the parties agree that it is a means-plus-function element.

St. Clair contends that the function corresponding to the "picture image resolution determining means" is "selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image," and the corresponding structure is "circuitry and/or a set of instructions programmed or configured to perform the recited function of selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image and equivalents thereof." (D.I. 486, Ex. 21 at 37.) Fuji offers a function that is substantially the same as St. Clair's and contends that the corresponding structure includes "switches 14A and 14B, logic gates 60a and 60b, function & address decoder 19, CPU 20 and stored program instructions. The stored program instructions cause the CPU to read the setting of the switches 14A and 14B to determine the parameters to be applied to the image." (Id.) Canon contends that the recited function is "to select parameters for a compression algorithm that are to be applied to the digital still image data for a still picture," and that the corresponding structure is:

a second manual switch (14A) that selects one of three, two-bit data codes (55) and a third manual switch (14B) that selects one of two, one-bit data codes (54). Both manual switches together choose one, three-bit data

code and thereby choose one set of six sets of parameters (i.e., B&W or Color combined with Low, Medium or High compression).

(Id.)

After reviewing and considering the claim language and specification of the '219 patent in light of the parties' respective arguments, the Court concludes that the function of the "picture image resolution determining means" is "selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image." This construction is consistent with the plain language of the claim.

Additionally, the Court concludes that the structures corresponding to the aforementioned function are "at least one switch, circuitry and/or a set of instructions programmed or configured to perform the recited function of selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image and equivalents thereof." These structures are supported by the context of the patent, which relates to computer-implemented inventions. Further, the specification describes at least one switch, circuitry and/or instructions as the necessary structures for determining compression algorithm parameters. (See the '219 patent, col. 4, ll. 57-61.; col. 5, ll. 9-56; col. 9, ll. 31-57.)

In sum, the Court concludes that the "picture image

resolution determining means," as used in claim 2 of the '219 patent, corresponds to the function of "selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image." The Court also concludes that the structures corresponding to this function are at least one switch, circuitry and/or a set of instructions programmed or configured to perform the recited function of selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image and equivalents thereof.

- b. The other claims using "picture image resolution determining means" or similar terms

Claim 17 of the '219 patent also describes a "picture image resolution determining means," and claim 12 of the '219 patent describes an "image resolution determining means." Although the parties dispute the meaning of these phrases, the parties agree that each is in means-plus-function format.

The disputed terms above are similar, if not identical, to the term "picture image resolution determining means," found in claim 1 of the '219 patent and construed above. Additionally, the disputed phrases recite similar, if not identical, functions, and, for these phrases, the parties request similar, if not identical, constructions. In accordance with these similarities, the Court's reasoning above, and the slight variations in the



language of the claims, the Court concludes: (1) the function of "picture image resolution determining means" in claim 17 of the '219 patent, and "image resolution determining means" in claim 12 of the '219 patent is "selectively determining which of a plurality of compression algorithm parameters are to be applied to said digital data information signals" or the slight variation thereof described in the claim language; and (2) each of the aforementioned terms corresponds to the structures of at least one switch, circuitry and/or a set of instructions programmed or configured to perform the recited function, and equivalents thereof.

8. The '219 patent, claim 8: "audio recording means"

Claim 8 of the '219 patent describes an "audio recording means for simultaneously storing digital audio signals associated with each subject image." The parties dispute whether this phrase is in means-plus-function form. St. Clair contends that an "audio recording means," as referenced in the disputed phrase, would be understood as the structure "audio recorder." Canon contends that, because the disputed term contains the word "means," it is presumed to be in means-plus-function form. Canon further contends that the disputed phrase does not describe a structure sufficient to rebut this presumption.

After reviewing the claim language in light of the parties' respective positions, the Court concludes that "audio recording

means for simultaneously storing digital audio signals associated with each subject image" is in means-plus-function form. The claim language describes a method "for simultaneously storing digital audio signals associated with each subject image," but does not specifically describe the structure corresponding to this function. St. Clair contends that an "audio recorder" is the corresponding structure. However, the plain language of the disputed claim does not disclose an audio recorder or a specific type of audio recorder; instead the claim more vaguely refers to "audio recording means." This description is not sufficient to overcome the presumption, created by the use of the word "means," that this term is in means-plus-function form.

Next, the Court must determine the function described by the disputed phrase. St. Clair contends that, to the extent the term is in means-plus-function form, the function performed by the audio recording means is "simultaneously storing digital audio signals associated with each subject image." (D.I. 486, Ex. 21 at 39.) Canon contends that the recited function is "to record a digitized audio file (56) for a still picture on the removable magnetic diskette (50) while simultaneously recording the digital still image data (53) for a still picture on the same removable magnetic diskette (50)." (Id.)

The Court concludes that the recited function is "simultaneously storing digital audio signals associated with

each subject image." This construction is consistent with the plain language of the claim.

As for the corresponding structure, St. Clair contends that the corresponding structure is "memory and equivalents thereof." Canon contends that the corresponding structure is "an acoustic digitizer circuit that digitizes sound and is connected to the CPU (20) via an I/O interface (similar to 80)."

After reviewing the claim language and the specification of the '219 patent in light of the parties' respective positions, the Court concludes that the structure "memory and equivalents thereof" corresponds to the aforementioned function. Canon contends that a more specific and detailed structure is necessary. However, the specification does not indicate that such specificity is necessary and instead only requires a memory structure to record audio.<sup>8</sup> See the '219 patent, Fig. 2A, col. 5, ll. 64-67; col. 6, ll. 24-26.

9. The 219 patent, claim 8: "memory file correlation means"

Claim 8 of the '219 patent describes a "memory file correlation means for associating in said memory element the respective storage locations of said audio signals with its

---

<sup>8</sup> In the Court's view, the defined functions of claim 8 of the '219 patent relates only to the storing of digital audio signals. Thus, Canon's contentions, in requiring digitizer circuits to digitize sound, go beyond the structure necessary to perform the necessary structure and describe structure for an additional digitizing function.

associated image signals." The parties dispute whether this phrase is in means-plus-function form. St. Clair contends that this claim element refers to the structure of a "memory file." Canon contends that the claim term refers to an undefined structure that correlates data in the "memory file" and not the memory file itself.

After reviewing the claim language in light of the parties' respective arguments, the Court concludes that "memory file correlation means" is a means-plus-function element. St. Clair contends that this term discloses the structure of a "memory file." However, the claim language discloses a "memory file correlation means" and not just a "memory file." Accordingly, the Court concludes that a "memory file correlation means" is not a definite structure and resort to the specification is necessary to determine the claimed structure.

Before identifying the structure, the Court must first determine the function corresponding to the term "memory file correlation means." St. Clair contends that the appropriate function is "associating in said memory element the respective storage locations of said audio signals with its associated image signals." (D.I. 427 at 21.) Canon contends that the corresponding function is "to mark or tag the digital still image data (53) for a still picture on the removable magnetic diskette (50) with the location of a corresponding digitized audio file

(56) for the picture.” (D.I. 426 at 23.)

The Court concludes that the recited function is “associating in said memory element the respective storage locations of said audio signals with its associated image signals.” This construction is consistent with the plain language of the claim.

As for the corresponding structure, St. Clair contends that the corresponding structure is “a mark or tag, and equivalents thereof.” (D.I. 427 at 21.) Canon contends that the corresponding structure is “a CPU (20) that marks or tags digital still data for a still picture with the location of a corresponding digitized audio file (56) for a still picture using an I/O interface (similar to 80).” (D.I. 426 at 23.)

After reviewing the claim language and the specification of the '219 patent in light of the parties' respective positions, the Court concludes that the structure of “a mark or tag, and equivalents thereof” corresponds to the function “associating in said memory element the respective storage locations of said audio signals with its associated image signals.” Canon contends that the defined structure must be more specific. However, Canon's proffer describes elements unnecessary for the defined function. As described in the specification, the audio and image signals are associated by marking or tagging the image files with their corresponding digitized audio files. '219 patent, col. 5,

1. 64 - col. 1. 5.) Therefore, the Court concludes only a mark or tag is necessary to associate the storage locations of audio signals with their associated image signals.

10. The '219 patent, claim 16: "shutter means"

Claim 16 of the '219 patent describes a "shutter means operably associated with said lens." The parties dispute whether this phrase is in means-plus-function form. St. Clair contends that a shutter is a structure. St. Clair further contends that the disputed phrase does not recite a function corresponding to this structure, rebutting the presumption that Section 112, ¶ 6 applies to the disputed term. Canon contends that "shutter means" does not recite a definite structure and is a means-plus-function term.

After reviewing the claim language in light of the parties' respective positions, the Court concludes that the disputed phrase is not in means-plus-function form. A shutter is reasonably understood as a structure and "shutter means operably associated with said lens" describes such a structure and does not recite a function. Therefore, the presumption that "shutter means" is in means-plus-function form is rebutted and Section 112, ¶ 6 does not apply. Accordingly, the Court concludes that the term "shutter" should be construed consistently with its ordinary meaning as "a shutter" such that further construction by the Court is not required.

E. Alleged Step-Plus-Function Terms

Step-plus-function terms are also governed by Section 112, ¶ 6, which states that:

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

In determining whether a claim element is written in step-plus-function format, the Court must first look at the language of the claim. If the claim element uses the phrase "step for," then a step-plus-function limitation is presumed, and Section 112, ¶ 6 is presumed to apply. On the other hand, if the claim element uses the word "step" alone or the phrase "steps of," then Section 112, ¶ 6 is presumed not to apply to that element. See Seal-Flex, Inc. v. Athletic Track & Court Constr., 172 F.3d 836, 849 (Fed. Cir. 1999).

1. The '459 patent: claim 16: "Generating an analog image signal corresponding to the imagewise pattern of radiant light incident on a plurality of light sensing pixel elements"

Claim 16 of the '459 patent describes a process comprising the step of "generating an analog image signal corresponding to the imagewise pattern of radiant light incident on a plurality of light sensing pixel elements." The parties dispute whether this phrase is in step-plus function form. Canon contends that this phrase is a step-plus-function element. Canon contends that the

phrase recites what is to be accomplished but does not describe how to accomplish it. St. Clair contends that the disputed phrase describes an act and is not governed by Section 112, ¶ 6.

After reviewing the claim language in light of the parties' respective positions, the Court concludes that the disputed phrase is not in step-plus-function form. Canon contends that because the claims could be rewritten to add the phrase "step for," Section 112, ¶ 6 has been invoked. However, the language of the claim does not use the words "step for," and therefore, this element is presumed not to be in step-plus-function form. See Masco Corp. v. United States, 303 F.3d 1316, 1327 (Fed. Cir. 2002). In the Court's view, this presumption is not overcome, because the disputed phrase recites the definite act of "generating an analog image signal corresponding to the imagewise pattern of radiant light incident on a plurality of light sensing pixel elements." See Masco, 303 F.3d 1327 (holding "that where a method claim does not contain the term 'step[s] for,' a limitation of that claim cannot be construed as a step-plus-function limitation without a showing that the limitation contains no act"). Further, the Court concludes that, with the exception of terms previously construed by the Court, this phrase should be construed consistent with its ordinary meaning and no further construction is required by the Court.

2. Other claims and phrases alleged to be in step-plus-function form.



Claim 16 of the '459 patent also describes a process comprising the steps of "converting the analog image signals . . .," "temporarily storing the digital electronic information signals . . .," "recording . . . at least one of a plurality of different digital output format codes . . .," "selecting from said selectable addressable memory means . . .," and "storing said digital electronic information signals . . .." Additionally, claim 17 of the '459 patent describes the process of "detecting the presence . . . of a remotely generated activating signal" and "activating said generating of said analog signal . . ."; and claims 1, 2, 3, and 4 of the '899 patent describe or incorporate the processes of "generating a digital image signal . . .," "formatting the digital image signal . . .," "storing the formatted computer image . . .," and "selecting one of a plurality of computer image file formats . . ." Canon contends that each of these phrases is also in step-plus-function form.

After reviewing the language of each phrase in light of the parties' respective positions and the applicable law, the Court concludes that each disputed phrase is not in step-plus-function form. The Court concludes that each of these phrases recites an act and does not require a step-plus-function construction. Further, the Court concludes that, with the exception of terms previously defined by the Court, each phrase should be defined by its ordinary and customary meaning, and further construction by

the Court is not required.

F. Miscellaneous Terms

In its Opening Brief, St. Clair lists several terms that it contends may be disputed by the parties. However, the only remaining term disputed by the parties is the use of the word "simultaneously" in claim 8 of the '219 patent.

Claim 8 of the '219 patent describes simultaneously storing digital audio signals associated with subject images. St. Clair contends that "simultaneously storing" means "storing at or about the same time." (D.I. 427 at 21.) Canon contends that "simultaneously storing" means "recording at exactly the same time." (D.I. 426 at 22.) Each party contends that its construction conveys the plain and ordinary meaning of the term.

After reviewing the claim language in the context of the specification of the patents, the Court concludes that "simultaneously" should be construed to mean "at or about the same time." This construction is consistent with the specification of the '219 patent, which describes concurrent operations being performed in a certain interval of time at different rates of speed. '219 patent, col. 6, ll. 2-5. This construction is also consistent with the plain meaning of the word "simultaneous" as it is used in the computer context. See Microsoft Press Computer Dictionary 410 (4th ed. 1999) ("Loosely, concurrent operation in which more than one task is processed by

dividing processor time among the tasks.").

#### **CONCLUSION**

For the reasons discussed, the Court has construed the disputed terms of the '459, '219, '899, and '010 patents as provided herein. An Order consistent with this Opinion will be entered setting forth the Court's construction of the disputed terms in the 459, '219, '899, and '010 patents.

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

ST. CLAIR INTELLECTUAL PROPERTY :  
CONSULTANTS, INC., :  
 :  
Plaintiff, :  
 :  
v. : Civil Action No. 03-241 JJF  
 :  
CANON INC., CANON U.S.A., INC., :  
FUJI PHOTO FILM CO., LTD, :  
FUJI PHOTO FILM U.S.A., INC., :  
and FUJIFILM AMERICA, INC. :  
 :  
Defendants. :

**ORDER**

At Wilmington, this 31st day of August 2004, for the reasons set forth in the Memorandum Opinion issued this date;

IT IS HEREBY ORDERED that for purposes of United States Patent Nos. 5,138,459 (the "'459 patent"), 6,094,219 (the "'219 patent), 6,233,010 (the "'010 patent"), and 6,323,899 (the "'899 patent"), the following terms and/or phrases are assigned the following meanings:

1. The phrase "plurality of different data formats for different types of computer apparatus," as used in claim 16 of the '459 patent, means "a plurality of different data formats for different types of computer apparatus where: (1) a 'data format' is the arrangement of digital data in a file including image, audio, text or other data and includes, at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD and WAV, and (2) a 'computer apparatus' is a computer and any operating system or

application software loaded on the computer. Computer apparatus are 'different types' within the meaning of the claims if they are loaded with different application software, even if they are otherwise the same."

2. To the extent that the remaining claims of the patents-in-suit use the phrase construed in Paragraph 1 and/or variations of that phrase, the phrase and its variations shall be construed consistently with the Court's construction in Paragraph 1 and with the following additional constructions:

a. The terms "file format," "data file format," and "data format" mean "the arrangement of digital data in a file, including image, audio, text or other data and includes, at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD and WAV."

b. The term "image file format" means "an arrangement of digital image data in a file and includes, at least, the file formats JPEG, GIF, TIFF, PICT, MPEG, BMP, JFIF and DCF."

c. The phrase "formatting said digital signal in one of a plurality of computer formats" means "arranging digital image data into one of a plurality of image file formats, including, at least, JPEG, GIF, TIFF, PICT, MPEG, BMP, JFIF and DCF."

d. The term "output data format code" means "a code stored in the camera that corresponds to a data file format."

e. The terms "information handling apparatus" and "information handling systems" mean "a collection of hardware and software for the purposes of handling information that includes that includes both computers and peripheral devices."

f. Computer apparatus and information handling systems and apparatus are "different types" within the meaning of the claims if they are loaded with different application software, even if they are otherwise the same.

3. The phrase "selecting . . . one of said different digital output format codes to be associated with each said digital electronic information signals," as used in claim 16 of the '459 patent, means "selecting one of said different digital output data format codes to be associated with each said digital electronic information signals where an 'output data format code' is a code stored in the camera that corresponds to a data file format and 'data file format' is the arrangement of digital data in a file, including image, audio, text or other data and including, at least, MPEG, JPEG, GIF, TIFF, PICT, BMP, JFIF, DCF, TXT, DOC, WPD and WAV."

4. To the extent that the remaining claims of the patents-in-suit use the phrase construed in Paragraph 3 and/or variations of that phrase, the phrase and its variations shall be construed consistently with the construction set forth in Paragraph 3 and with the constructions of any previously defined terms, to the

extent they are applicable.

5. The phrase "in an electronic camera," as used in claim 1 of the '219 patent, means "in a self-contained, portable electronic camera, with the capability to take still pictures, the components of which are contained in a single housing." To the extent that the remaining claims of the patents-in-suit use the word "camera" that term is construed as "a self-contained, portable camera, with the capability to take still pictures, the components of which are contained in a single housing."

6. The phrase "[a] process for storing an electronically sensed video image," as used in claim 16 of the '459 patent means "a process for storing an electronically sensed video image in a self-contained, portable electronic camera, with the capability to take still pictures, the components of which are contained in a single housing."

7. The phrase "means for capturing image data corresponding to a selected image," as used in claim 10 of the '219 patent is a means-plus function element with a function of "capturing image data corresponding to a selected image" and structure of electro-optical sensors including Charge Coupled Device (CCD), C-MOS sensor, Infrared Sensor (IR), and Ultra-Violet sensor (UV), and equivalents thereof.

8. The phrase an "array of light sensing pixel elements" is not a means-plus-function element and means "an array of

discrete light sensing pixel elements, including, at least, Charge Coupled Device (CCD), C-MOS sensor, Infrared sensor (IR), and Ultra-Violet sensor (UV)."

9. The term "image pick-up unit," as used in Claim 1 of the '010 patent and claims 1 and 3 of the '899 patent, is not a means-plus-function element and means "an image sensor, such as, Charge Coupled Device (CCD), C-MOS sensor, Infrared sensor (IR), Ultra-Violet sensor (UV) alone or in combination with an analog to digital converter(s)."

10. The phrase "means for digitizing captured image data," as used in claims 1 and 10 of the '219 patent is a means-plus-function element with a function of "digitizing captured image data" and a structure of analog to digital converter(s), and equivalents thereof.

11. The phrase "analog to digital converter means," as used claim 16 of the '219 patent is not a means-plus-function element and means "analog to digital converter(s)."

12. The phrase "removably mounted memory means," as used in claim 10 of the '219 patent, is not a means-plus-function element and means "removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

13. To the extent that the remaining claims of the patents-in-suit use memory related terms, those terms are defined



consistently with the construction provided in Paragraph 16 as follows:

a. The term "removably mounted memory means," as used in claim 10 of the '219 patent, means "removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

b. The term "memory element," as used in claim 1 of the '219 patent, means "memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

c. The phrase "wherein said memory element comprises a removably mounted digital disk," as used in claim 3 of the '219 patent, means "removable digital disk, e.g. floppy disks, optical disks, and magnetic disks."

d. The phrase "selectable addressable memory means," as used in claim 16 of the '459 patent, means "selectable addressable memory."

e. The phrase "memory means," as used in claims 16 of the '219 patent, means "any digital memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

f. The phrase "wherein said memory means comprises digital data means having a plurality of addressable sections for

storing said digital data information signals," as used in claim 18 of the '219 patent, means "wherein said memory means comprises digital data means having a plurality of addressable sections for storing said digital data information signals."

g. The phrase "removable storage device," as used in claim 1 of the '010 patent, means "removable memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

h. The phrase "storage device," as used in claims 1 and 3 of the '899 patent, means "any memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

i. The phrase "digital memory," as used in claim 16 of the '459 patent, means "any digital memory, e.g. floppy disks, optical disks, magnetic disks, magnetic media, memory storage disk drive, semiconductor memory, and solid state memory."

14. The phrase "output data control means" as used in claim 1 of the '219 patent is a means-plus-function element with a function of "selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image" and a structure of a microprocessor programmed to perform the recited

function of selecting for each digitized captured image to be stored in the memory element one of a plurality of different output data format codes stored in the camera and assigning the selected format code to the digitized captured image, and equivalents thereof .

15. To the extent that the remaining claims of the patents-in-suit use "output data control means" or "output data format control means," these terms are means-plus-function elements which perform the function described in each claim, and the corresponding structures are a microprocessor programmed to perform the function recited in each claim.

16. The term "logic means," as used in the patents-in-suit, is not a means-plus-function element and means "circuitry and/or a set of instructions."

17. The term "digital control unit," as used in claim 1 of the '010 patent, is not a means-plus-function element and means "a microprocessor alone or in combination with circuits under control of the microprocessor."

18. The phrase "picture image resolution determining means," as used in claim 2 of the '219 patent, is a means-plus-function element with a function of "selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image" and structures of at least one switch, circuitry and/or a set of instructions

programmed or configured to perform the recited function of selectively determining which of a plurality of compression algorithm parameters are to be applied to said digitized captured image and equivalents thereof.

19. The phrases "picture image resolution determining means" in claim 17 of the '219 patent and "image resolution determining means" in claim 12 of the '219 patent are means-plus-function elements with a function of "selectively determining which of a plurality of compression algorithm parameters are to be applied to said digital data information signals," or the slight variation thereof described in the claim language, and structures of at least one switch, circuitry and/or a set of instructions programmed or configured to perform the recited function, and equivalents thereof.

20. The phrase "audio recording means," as used in claim 8 of the '219 patent, is a means-plus-function element with a function of "simultaneously storing digital audio signals associated with each subject image" and a structure of memory and equivalents thereof.

21. The phrase "memory file correlation means," as used in claim 8 of the '219 patent, is a means-plus-function element with a function of "associating in said memory means the respective storage locations of said audio signals with its associated image signals," and a structure of a mark or tag, and equivalents

thereof.

22. The term "shutter means," as used in the patents-in-suit, is not a means-plus function element and means "shutter."

23. The phrase "generating an analog image signal corresponding to the imagewise pattern of radiant light incident on a plurality of light sensing pixel elements," as described in claim 16 of the '459 patent, is not a step-plus-function element and, with the exception of terms previously construed by the Court, should be construed consistently with its ordinary meaning.

24. The phrases "converting the analog image signals . . .," "temporarily storing the digital electronic information signals . . .," "recording . . . at least one of a plurality of different digital output format codes . . .," "selecting from said selectable addressable memory means . . .," and "storing said digital electronic information signals. . .," as described in claim 16 of the '459 patent, "detecting the presence . . . of a remotely generated activating signal" and "activating said generating of said analog signal . . .," as described in claim 17 of the '459 patent, and "generating a digital image signal . . .," "formatting the digital image signal . . .," "storing the formatted computer image . . .," and "selecting one of a plurality of computer image file formats . . .," as described in claims 1, 2, 3, and 4 of the '899 patent are not in step-plus-

function form, and with the exception of terms previously construed by the Court, should be construed consistently with their ordinary meaning.

25. The term "simultaneously," as used in the patents-in-suit, means "at or about the same time."

JOSEPH J. FARNAN, JR.  
UNITED STATES DISTRICT JUDGE