United States District Court,
E.D. New York.

ELBEX VIDEO, LTD,
Plaintiff.
v.
AXIS COMMUNICATIONS, INC,
Defendant.

No. 05 CV 3345(CBA)

Aug. 19, 2008.

Michael F. Sarney, Katten Munchin Rosenman LLP, New York, NY, for Plaintiff.

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Court-Filed Expert Resumes

REPORT AND RECOMMENDATION

CHERYL L. POLLAK**, United States Magistrate Judge.**

On July 15, 2005, plaintiff Elbex Video, Ltd. ("Elbex") commenced this patent infringement action against defendant Axis Communications, Inc. ("Axis"), alleging that Axis distributed certain closed-circuit television ("CCTV") components which infringed on a patent owned by Elbex. On May 30, 2006, plaintiff filed its Amended Complaint, adding claims for infringement of two additional patents. Specifically, plaintiff claims that defendant infringed upon U.S. Patent No. 4,989,085 (the "'085 Patent"), issued for an "Apparatus For Remote Verification and Control of Close [sic] Circuit Television Cameras;" U.S. Patent No. 4,943,864 (the "'864 Patent"), issued for a "Closed Circuit Television Apparatus For Supervisory System;" and U.S. Patent No. 4,945,417 (the "'417 Patent"), issued for a "Method And Apparatus For Remotely Pre-Setting Closed Circuit Television Camera." (Am. Compl . FN1 para.para. 4, 7-10, Exs. A-C).

FN1. Citations to "Am. Compl." refer to plaintiff's Amended Complaint, filed May 30, 2006.

On June 28, 2007, the district court referred the claim construction hearing to the undersigned for Report and Recommendation. The parties submitted briefing on the claim construction issue, and a hearing was held before this Court on December 11, 2007. Having considered the parties' respective arguments, the Court respectfully recommends that the patent terms at issue be construed as set forth below.

BACKGROUND

By way of background, CCTV systems generally include one or more remote-controlled television cameras each located at a specific place to be observed. (Pl.'s Mem.FN2 at 1-2; Def.'s Mem.FN3 at 3). Each of the cameras is connected to a central monitoring station, where a monitor is located for receiving the video signals and displaying images to be observed. (Pl.'s Mem. at 2; ' 085 Patent, col. 1, ll. 16-17; Def.'s Mem. at 3). A switching mechanism selects a television camera, the positions and operation of which are controlled by a controlling device. (' 085 Patent, col. 1, ll. 18-24; Def.'s Mem. at 3-4).

FN2. Citations to "Pl.'s Mem." refer to Plaintiff Elbex Video, Ltd .' s Brief on Claim Construction, filed October 26, 2007.

FN3. Citations to "Def.'s Mem." refer to Defendant Axis Communications, Inc.'s Opening Brief on Claim Construction, filed October 26, 2007.

Plaintiff filed applications for the three patents at issue on November 14, 1988. (Pl.'s Mem. at 1, Ads. A, B, C).FN4 The patents at issue each sought to improve upon certain specific aspects of the CCTV systems at the time. The ' 085 Patent claims a method of ensuring that the CCTV attendant at the monitoring station will only operate the television camera whose video signal is received. (' 085 Patent, col. 1, ll. 49-53). The ' 864 Patent claims a method of easily identifying, by "unrestricted visual alpha numeric characters or illustrative visual display," the camera transmitting its video signals to the monitoring station. (' 864 Patent, col. 1, ll. 41-47). Finally, the ' 417 Patent claims, *inter alia,* a CCTV apparatus that includes a television camera that can be preset to observe a "multi predetermined specified object or scene with ease," as well as a system in which there is no need to transmit information corresponding to the position of the television camera to or from the controlling device. (' 417 Patent, col. 1, ll. 46-55).

FN4. Addendum A to plaintiff's Memorandum contains a copy of the ' 085 Patent, Addendum B contains a copy of the '864 Patent, and Addendum C contains a copy of the '417 Patent.

Plaintiff, in its Amended Complaint, asserts that defendant has infringed on the patents at issue by manufacturing and selling products that would be covered by these patents. (Am.Compl.para.para. 12-14). Plaintiff asserts that this alleged infringement has caused it harm and seeks lost profits, royalties, and an injunction restricting defendant from further infringement. (*Id*. para.para. 15-16). On August 11, 2006, defendant filed an Answer and Counterclaims, asserting various affirmative defenses to plaintiff's allegations and seeking declaratory judgments of noninfringement and invalidity as to all of the patents at issue. The parties engaged in extensive discovery and subsequently agreed on the necessity of claim construction.

DISCUSSION

A. *Standards*

Claims for patent infringement require a two-step analysis: "[t]he first step is determining the meaning and scope of the patent claims asserted to be infringed .... The second step is comparing the properly construed

claims to the device accused of infringing." Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed.Cir.1995) (*en banc*), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Only the first step, commonly referred to as claim construction, is at issue here. Claim construction is a matter of law to be determined by the court. (Id. at 979). In construing claims, the claim terms should be given their "ordinary and customary meaning," Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996), which the Federal Circuit has determined is the "meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed.Cir.2005).FN5

FN5. In certain instances, the inventor may be deemed to have acted as his own "lexicographer" if he has "use[d] terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d at 1582 (citing Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1578 (Fed.Cir.1996) and Hormone Research Found. v. Genentech, Inc., 904 F.2d 1558, 1563 (Fed.Cir.1990) (noting that "a patentee is free to be his or her own lexicographer and thus may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings")).

In determining how a person of "ordinary skill in the art" would understand and define the terms in a claim, the court has a number of sources available to it. Of primary importance is not only the "context of the particular claim in which the disputed term appears, but ... the context of the entire patent, including the specification." Phillips v. AWH Corp., 415 F.3d at 1313. Indeed, the context of the claim itself is "highly instructive" in a determination of the meaning of a term, and furthermore, "the usage of a term in one claim can often illuminate the meaning of the same term in other claims." Id. at 1314 (citing Mars, Inc. v. H.J. Heinz Co., 377 F.3d 1369, 1374 (Fed.Cir.2004) and Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed.Cir.2001)). The primary example of this "illumination" occurs when a term in a dependent claim is given a particular limitation; this occurrence "raises a presumption that the limitation in question is not found in the independent claim." Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004) (determining that the inclusion of a reference to "pressure jackets" in dependent claims gave rise to presumption that independent claims did not require "pressure jackets").

Patent claims must also "be read in view of the specification, of which they are a part." Markman v. Westview Instruments, Inc., 52 F.3d at 979. Indeed, the specification, in which the inventor describes the invention, " 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' " Phillips v. AWH Corp., 415 F.3d at 1315 (citing Vitronics Corp. v. Conceptronic, Inc., 90 F.3d at 1582). The importance of the specification in construing claims is due in part to the requirement imposed on inventors that the specification "contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art ... to make and use the same." 35 U.S.C. s. 112, para. 1. Accordingly, it follows that "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." Renishaw PLC v. Marposs Societa per Azioni, 158 F.3d 1243, 1250 (Fed.Cir.1998). Indeed, it is often in the specification that the inventor has demonstrated an intent to be his own "lexicographer," by using terms "in a manner inconsistent with their ordinary meaning." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d at 1582. However, the court must be cautious not to unduly restrict the scope of the claims at issue by "adding limitations appearing only in the specification," particularly in the embodiments included in the patent application. Electro Med. Sys., S.A. v. Cooper Life Scis., Inc., 34 F.3d 1048, 1054 (Fed.Cir.1994).

"Particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments." *Id*. Stated otherwise, "particular embodiments appearing in the written description will not be used to limit claim language that has broader effect." Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1117 (Fed.Cir.2004).

The next source to be considered is the patent's prosecution history, " 'if it is in evidence.' " Phillips v. AWH Corp., 415 F.3d at 1317 (citing Markman v. Westview Instruments, Inc., 52 F.3d at 980). The prosecution history, which is the record of the exchange between the inventor and the United States Patent and Trademark Office ("USPTO"), "was created by the patentee in attempting to explain and obtain the patent." *Id*. However, the prosecution history is less useful in construing claims than the claim context or the specification, as it is the "ongoing negotiation" between the patentee and the USPTO and is usually not as clear as these other sources. *Id*. That qualification notwithstanding, the prosecution history can often be useful in demonstrating "how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id*. The prosecution history, together with the claims themselves and the specification, is deemed part of the "intrinsic evidence" of the patent.

In the *Phillips* decision, the Federal Circuit made clear that intrinsic evidence is to be examined before turning to sources outside the patent itself. These other sources, referred to as "extrinsic" evidence, include testimony by the inventor or experts in the field, dictionaries, and treatises. *Id*. at 1317. Dictionaries and treatises may be helpful to the court's understanding of the patent's " 'underlying technology' " and to demonstrate how one skilled in the relevant art would understand the disputed terms. *Id*. at 1318 (citing Vitronics Corp. v. Conceptronic, Inc., 90 F.3d at 1584 n. 6). Expert testimony may be useful in a number of ways:

to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.

Id. (citing Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1308-09 (Fed.Cir.1999) and Key Pharms. v. Hercon Labs. Corp., 161 F.3d 709, 716 (Fed.Cir.1998)). The court, however, should refrain from relying on "conclusory, unsupported assertions" by experts about a term's meaning, or testimony that is " 'clearly at odds' " with the intrinsic evidence at hand. *Id*. (citing Key Pharms. v. Hercon Labs. Corp., 161 F.3d at 716).FN6

FN6. In this case, defendant takes issue with the declaration of plaintiff's purported expert, Richard A. Kramer, arguing that Mr. Kramer fails to define the qualifications of a person skilled in the art, thus preventing the Court from "ascertain[ing] the relevance of the declarant's statements or conclusions." (Defendant Axis Communications, Inc.'s Response to Plaintiff Elbex Video Ltd.'s Brief on Claim Construction, filed November 21, 2007 ("Def.'s Resp."), at 28). Defendant also disputes that Mr. Kramer qualifies as an expert, contending that he lacks sufficient experience in "the CCTV technology field in the 1988 timeframe." (*Id*. at 29). Defendant encourages the Court to disregard Mr. Kramer's conclusions because they are " 'conclusory, unsupported assertions.' " (*Id*. (citing Phillips v. AWH Corp., 415 F.3d at 1318)). In response to defendant's critique of its expert, plaintiff submitted the Supplemental Declaration of Richard A. Kramer, dated November 21, 2007, and introduced at the December 11, 2007 *Markman* hearing Mr. Kramer's corrected curriculum vitae ("CV"), which includes CCTV experience in the years 1984-87. By

letter dated December 20, 2007, defendant objected to Mr. Kramer's corrected CV, noting that the CCTV experience from 1984-87 was not included in a version of the CV provided to defendant's counsel in February, 2007. The Court has considered defendant's objections and does not find that Mr. Kramer's testimony should be stricken. Mr. Kramer has significant experience in the electronics field, including a Bachelor of Science in Electrical Engineering, and is well qualified to provide testimony about the electronics terms referenced herein. In addition, the Court notes that in no instance is the testimony of either party's expert dispositive of the construction of the disputed terms.

In addition, the court must keep in mind that several factors make extrinsic evidence as a whole less reliable than the intrinsic evidence previously described. The *Phillips* court enumerated five such considerations: 1) the fact that extrinsic evidence is not part of the patent and thus, unlike the specification, does not have the "virtue of being created at the time of the patent prosecution for the purpose of explaining the patent's scope and meaning;" 2) the practical concern that general treatises or dictionaries may not "reflect the understanding of a skilled artisan in the field of the patent;" 3) the possible bias when expert reports and testimony are generated for litigation purposes; 4) the "virtually unbounded universe" of potential extrinsic evidence, which often leads to difficulty in "filtering the useful extrinsic evidence from the fluff;" and 5) the risk of "undue reliance" on extrinsic evidence, resulting in an alteration of the meaning of the claims "in derogation of the 'indisputable public records consisting of [the patent's intrinsic evidence]', thereby undermining the public notice function of patents." *Id*. at 1318-19 (internal citations omitted). In light of these considerations, the *Phillips* court concluded that a court has "sound discretion" to admit and use extrinsic evidence but should be mindful of the "flaws inherent" in both extrinsic and intrinsic evidence when construing claims.

Finally, many of the claims at issue in any patent dispute are expressed in "means-plus-function" language. Title 35, Section 112, paragraph 6 of the United States Code 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 claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. s. 112, para. 6. "A means-plus-function limitation recites a function to be performed rather than definite structure or materials for performing that function." Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d 1308, 1318 (Fed.Cir.2003) (citing Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1307 (Fed.Cir.1998)). In construing means-plus-function language, the court must first identify the claimed function. *Id*. The next step is to identify "the structure in the specification which performs the recited function." Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1257 (Fed.Cir.1999). The structure corresponding to the function must be "clearly link[ed] or associate[d]" with the function recited in the claim, and it must "include all structure that actually performs the recited function." Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1298 (Fed.Cir.2005). It follows that the court may not incorporate "structure from the written description beyond that necessary to perform the claimed function." Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d at 1258.

Analysis of claim terms under 35 U.S.C. s. 112, para. 6 is generally triggered by the patentee's use of the word "means," followed by a description of the function to be performed. If the word "means" appears in the

claim element, a presumption operates that 35 U.S.C. s. 112, para. 6 applies. Id. at 1257. If "means" is not used, the presumption does not operate (*id.*), and the burden is on the party seeking to rebut the presumption to demonstrate, by a preponderance of the evidence, that "the claim term fails to recite sufficiently definite structure or else recites a function without reciting sufficient structure for performing that function." Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1372 (Fed.Cir.2003) (internal citations and quotations omitted). The *Apex* court clarified that "[t]his presumption can collapse when a limitation lacking the term 'means' nonetheless relies on functional terms rather than structure or material to describe performance of the claimed function." *Id.*

Finally, in analyzing whether a claim term sets forth sufficient structure or material corresponding to the asserted function, the court examines whether the term " 'has an understood meaning in the art,' " while keeping in mind that it " 'need not call to mind a single well-defined structure' to fall within the ambit of s. 112, para. 6." *Id.* (citing Watts v. XL Systems, Inc., 232 F.3d 877, 880 (Fed.Cir.2000) and Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed.Cir.1996)). Indeed, the Federal Circuit has deemed it sufficient even if the claim term "covers a broad class of structures and even if the term identifies the structures by their function," so long as the term is "used in common parlance or by persons of skill in the pertinent art to designate structure." Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1359-60 (Fed.Cir.2004).

B. ***Application***

The parties dispute many of the terms employed in the three patents, as set forth below. In addition, each party takes issue with the other's overall approach to the claim construction process. Specifically, defendant's arguments about the patents at issue are premised on the assertion that the patents relate only to analog-as opposed to digital-CCTV systems, which were prevalent at the time the patent applications were filed. (*See, e.g.,* Def.'s Mem. at 1). Defendant accordingly characterizes plaintiff's arguments as improperly seeking to broaden the reach of the patents to "generat[e] infringement positions where none exist" by ignoring the limitations contained in the patent language and proposing oversimplified and vague constructions of the terms at issue. (*Id* . at 2). Defendant asserts that the focus of the claim construction process should be on the patent language itself and on ensuring that the resulting constructions clarify the disputed terms for a jury. (*See, e.g.,* id. at 10, 17, 32, 40).

Plaintiff asserts that given that the patents at issue are not limited to analog technology, they may properly be construed to embrace digital technology as well. (Pl.'s Reply FN7 at 1 (citing SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d 870, 879 (Fed.Cir.2004))). Plaintiff further notes that digital technology was in existence at the time of the patent application. (*Id.* at 2). In addition, plaintiff characterizes defendant's arguments generally as improper because they import limitations from the specification into the claim in an attempt to narrow the scope of the patents to only the embodiment described in the specification. (Pl.'s Mem. at 1). Plaintiff further faults defendant for asserting that manifestly clear terms need defining and for "improperly alter[ing] the language of the claims by substituting its own terms for the terms used by the inventor." (*Id.;* Pl.'s Reply at 4). Finally, plaintiff asserts that defendant's focus on the jury's understanding is misguided, given that claims are to be construed from the perspective of one skilled in the relevant art, and thus, any determination of whether a claim is confusing or unclear should be made from that perspective. (Pl.'s Reply at 4-5).

FN7. Citations to "Pl.'s Reply" refer to Plaintiff Elbex Video, Ltd.'s Reply Brief on the Issue of Claim Construction, filed November 21, 2007.

The Court addresses most of these arguments in its analysis of the disputed terms below. However, the Court notes as an initial matter that although the specific question of whether the patents at issue are limited to analog technology is not before the Court, plaintiff correctly notes that if certain language of a patent is not itself limited to a certain type of technology, it may be properly construed to cover future technologies that operate in a manner similar to that prevalent at the time the patent was issued. *See, e.g.,* SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d at 879-880 (finding that "[t]he law 'does not require that an applicant describe in his specification every conceivable and possible future embodiment of his invention' ") (citing SRI Int'l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1111 (Fed.Cir.1985)). As such, it is entirely possible that the patents at issue could be construed to embrace corresponding digital technology. In light of the fact that defendant's argument in this regard is limited to a general characterization of the patents and is not raised with respect to any of the disputed patent terms at issue, the Court finds it unnecessary to determine whether the technology described in the patents is limited to analog technology.

In addition, as set forth in further detail in the Court's discussion of the disputed terms below, the Federal Circuit has made it clear that if a claim term is used in its "ordinary and accustomed meaning," it is improper to limit that meaning by importing definitions from the specification or other sources. *See, e.g.,* Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 990-92 (Fed.Cir.1999). Furthermore, as plaintiff correctly notes, disputed patent terms are to be construed at all times from the vantage point of one skilled in the relevant art, *see* Phillips v. AWH Corp., 415 F.3d at 1313, and thus defendant's focus on clarifying terms for a lay jury is misdirected. With these principles in mind, the Court turns to the disputed terms of the patents at issue.

1. *The* '085 Patent

The '085 Patent explains that a CCTV system consists of a plurality of television cameras connected to a central supervisory monitoring station where the cameras can be controlled. ('085 Patent, col. 1, ll. 13-24). The television cameras send video signals to the supervisory station; the video signals should be "interlocked" FN8 with control signals to control the cameras. (' 085 Patent, col. 1, ll. 25-32). The ' 085 Patent sought to address problems in the then-existing CCTV technology, whereby the "interlock" between the video signals and the control signals could fail, resulting in the wrong camera being controlled. (Id., col. 1, ll. 33-37). The ' 085 Patent also sought to address another problem, wherein the attendant at the supervisory station was required to operate separate controls to connect the monitor and the controlling device, respectively, to the selected camera, a time-consuming and error-prone process. (Id., col. 1, ll. 38-46). The ' 085 Patent addressed these problems by creating a structure in which "only the television camera [whose] video signal is received will be remotely operated by the attendant without error." (Id., col. 1, ll. 49-53). The ' 085 Patent was issued on January 29, 1991 and contains three (3) claims.

FN8. The Court notes that defendant has described the object of the ' 085 Patent as creating "both a physical interlock and logical interlock." (Def.'s Mem. at 6). Plaintiff takes issue with defendant's characterization, arguing that the term "interlock" only appears in the portion of the '085 Patent describing the problems with the prior art and noting that "[n]owhere in the specification does it state that the invention claimed in the '085 Patent is directed to a solution to provide any kind of 'interlock.' " (Pl.'s Reply at 2). The Court employs the term here because of its inclusion in the '085 Patent's description of the prior art but does not find it necessary for the purposes of this claim construction proceeding to decide the issue of whether the '085 Patent indeed relates to an "interlock."

Claim 1 of the '085 Patent, in which all of the disputed terms appear, reads as follows, with the disputed terms emphasized and limitation numbers added for ease of reference:

A *closed circuit television apparatus* comprising:

[1] a plurality of remote-controlled *television camera* s for generating *video signal* s, each camera including a circuit for generating *1st code signal* s allotted to a respective television camera;

[2] *receiving means* for receiving said video signals and said 1st code signals;

[3] *switching means* for selecting a television camera to be connected to said receiving means;

[4] said receiving means including a monitor for displaying images corresponding to the video signals received in said receiving means; and

[5] *controlling means* for controlling said television camera;

[6] said controlling means including *control and code generator means* for generating *control signal* s to control said television camera and *2nd code signal* s corresponding to the 1st code signals received in said receiving means and for transmitting said control signals and said 2nd code signals to said television camera;

[7] each television camera further including a *command circuit receiving said control signals and said 2nd code signals generated in said controlling means and operating said television camera in accordance with said control signals when said 2nd code signals coincide with a code allotted to said television camera*.

(Id., col. 7, ll. 28-41, col. 8, ll. 1-14). The parties' arguments about the meaning of each of the disputed terms are set forth below.

a. "*closed circuit television apparatus*"

Plaintiff argues that the Court need not construe the term "closed circuit television apparatus," because it appears in the preamble FN9 to claim 1 and "merely identifies the intended purpose of the claimed invention," as opposed to limiting the invention in any way. (Pl.'s Mem. at 9-10). Plaintiff further contends that no interpretation is necessary, given that the term is not ambiguous. (Id. at 10 (citing Renishaw PLC v. Marposs Societa per Azioni, 158 F.3d at 1248)). In light of defendant's insistence that the term requires interpretation, however, plaintiff proposes that it be defined as "a system that provides closed circuit access to one or more television cameras." (*Id.,* Ad.D).

FN9. The preamble of a patent consists of the language appearing after the words "What is claimed is:" and before the claim limitations. In the case of the patents at issue, the preamble reads as follows: "A closed circuit television apparatus comprising[.]"

Defendant, in turn, notes that a claim preamble "has the import that the claim as a whole suggests for it" and

that it should be construed "consistently with [claim construction] principles." (Def.'s Mem. at 12 (citing Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp., 55 F.3d 615, 620 (Fed.Cir.1995)) (alteration in Def.'s Mem.)). Accordingly, defendant asserts that interpretation of the preamble to the '085 Patent is necessary and "reveals what the inventor purportedly invented and intended to encompass by the claim," giving it "necessary meaning." (Id. at 13). Defendant proposes that the term at issue be defined as "a supervisory system that provides closed loop access to one or more television cameras." (Id. at 12). The addition of "supervisory" is necessary, defendant argues, in light of the invention's clear relation and reference to a " 'closed circuit television apparatus as a *supervisory system*.' " (Id. at 13 (citing '085 Patent, col. 1, ll. 8-9, col. 2, ll. 63-68, col. 3, ll. 1-28) (emphasis in memorandum); Def.'s Resp. at 4 (noting that a "supervisory" system is the "only type of CCTV apparatus disclosed in Elbex's patents")). Furthermore, defendant asserts that the inclusion of the words "closed loop" is appropriate because the invention requires "closed loop" access and because it would be defined as such by one of ordinary skill in the art and in the relevant field. (Def.'s Mem. at 13 (pointing to FIG. 1 of the '085 Patent's embodiment); Def.'s Resp. at 5 (citing a relevant treatise and the declaration of its expert)).

Plaintiff, in response, asserts simply that there is no reason to believe that the term "closed circuit television apparatus" would not be understood by one skilled in the art as meaning exactly what it says. (Pl.'s Reply at 5). Plaintiff further argues that the preamble "does not limit the claimed invention to a supervisory system," FN10 nor does the term "loop" appear anywhere in the ' 085 Patent, rendering defendant's inclusion of these terms unnecessary. (Pl.'s Reply at 5-6). More important, however, is plaintiff's argument that the preamble merely states an "intended purpose" of the invention, and thus does not give the ' 085 Patent "necessary meaning." Indeed, plaintiff contends that, for this reason, it is unnecessary even to interpret the preamble at all. (Id.)

FN10. Indeed, plaintiff points out that the claim is explicitly *not* limited to a supervisory system, noting that the specification specifically mentions "a closed circuit television system *such* as a supervisory system." (*See* Pl.'s Mem. at 10, n. 5 (citing '085 Patent, col. 1, ll. 13-14) (emphasis in Pl.'s Mem.)). Although defendant contends that a "supervisory" system is the "*only* type of CCTV apparatus disclosed in Elbex's patents" (Def.'s Resp. at 4), in light of the Court's conclusion below that the preamble need not be construed as a limitation on the claim and that the term "closed circuit television apparatus" has a clear meaning, the Court finds defendant's argument in this regard unavailing.

The Federal Circuit has held that if a claim preamble is " 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." Pitney Bowes, Inc. v. Hewlett Packard Co., 182 F.3d at 1305 (citing Kropa v. Robie, 38 C.C.P.A. 858, 187 F.2d 150, 152 (Fed.Cir.1951)).

If, however, the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation.

Id. Indeed, a preamble need not be construed if "the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention." Catalina Marketing Int'l, Inc. v. Coolsavings .com, Inc., 289 F.3d 801, 809 (Fed.Cir.2002). This is because "the patentability of apparatus or composition claims depends on the claimed structure, not on the use or

purpose of that structure." *Id*. In instances such as these, where the preamble contains only "statements of intended use," the preamble may limit apparatus claims, "but only if the applicant clearly and unmistakably relied on those uses or benefits to distinguish prior art." *Id*.

The Court finds that the preamble to claim 1 of the '085 Patent, which notably contains very little in the way of descriptive language, states only the "intended purpose" of the invention. Plaintiff did not invent CCTV, and as plaintiff notes, the preamble "simply denotes the particular art within which the claimed invention falls." (Pl.'s Mem. at 10). In another case in which the parties disputed the construction of a preamble containing the term "apparatus," the Federal Circuit held that the preamble simply gave "a descriptive name to the set of limitations in the body of the claim that completely set forth the invention," and that the claim would be infringed by "any apparatus encompassing all of the limitations in the body of the claim." IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1434 (Fed.Cir.2000). Accordingly, the Court declines to construe the term "closed circuit television apparatus," appearing in the preamble, as a limit to the claim.FN11

FN11. Moreover, even if the Court were to find it necessary to construe the preamble as a limitation on the claim, the Court finds that there is nothing ambiguous in the phrase "closed circuit television apparatus." Indeed, the Court finds that defendant's proposed addition of the term "supervisory," and more importantly, the term "loop," as limitations on the claim are not warranted by the claim itself or by any other intrinsic evidence. *See, e.g.,* Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d at 989-90 (holding that terms are to be given their ordinary meaning unless the patent inventor clearly indicated otherwise). The term "closed circuit" in connection with "television" is a term of art well understood in the field and nothing cited by defendant supports the substitution of "loop" for "circuit." *See, e.g., id.;* Teleflex, Inc. v. Ficosa N. Am. Group, 299 F.3d 1313, 1325 (Fed.Cir.2002).

b. ***television camera***

Plaintiff proposes that "television camera" be defined as "a camera that generates video signals" (Pl.'s Mem. at 14, Ad. D), while defendant defines the term as "a camera that generates video signals that can be displayed on a television receiver or monitor." (Def.'s Mem. at 14-15). Elbex takes issue with Axis' construction, arguing that it unnecessarily narrows the scope of a "very clear" term, which is impermissible "absent any 'expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.' " (Pl.'s Mem. at 15 (citing Teleflex, Inc. v. Ficosa N. Am. Group, 299 F.3d at 1325)). Plaintiff asserts that a "television camera" is necessarily included in any CCTV system, including systems in the prior art, and it is thus unnecessary to define the term any less broadly than in the prior art or to limit the term to "any particular type or configuration." (*Id*.) In addition, plaintiff notes that "not all images represented by the video signals will necessarily end up being displayed, but may be recorded instead." (*Id*.)

Defendant Axis asserts that the inclusion of the phrase "that can be displayed on a television receiver or monitor" is necessary because the context of claim 1 indicates the inclusion of a " 'monitor' for displaying the video signals generated by the television camera." (Def.'s Mem. at 15 (citing Pause Tech., LLC v. TiVo Inc., 419 F.3d 1326, 1331 (Fed.Cir.2005), for the proposition that claim terms must be construed in the context of the entire claim)). Defendant argues that plaintiff's definition improperly looks to the prior art and lacks important context "to tie it with the other claim elements." (Def.'s Resp. at 6). Finally, Axis contends that the Court should reject Elbex's assertion that images may be recorded, noting that the '085 Patent does not contain a single reference to the recording of images, and that plaintiff's argument is thus unsupported

by the intrinsic record of the patent. (Id.)

The Court finds that the proper construction of the term "television camera" is "a camera that generates video signals," a construction which is in keeping with the plain language of the claim and with the field of the invention. The language of the '085 Patent makes clear that a television camera would be an easily recognizable element by one skilled the art; indeed, presumably all of the prior CCTV art involved television cameras. The claim itself describes a "television camera[ ] for generating video signals," which is echoed in the specification. (*See* '085 Patent, col. 7, ll. 29-30, col. 1, ll. 56-57, col. 2, ll. 63-65, col. 4, ll. 4-5). Where the video signals are displayed goes to the question of what type of signals are generated and not to the issue of what a television camera is.FN12 Accordingly, the Court sees no reason to depart from the plain and general description of the "television camera," as set forth in the language of claim 1.

FN12. The Court notes that although defendant correctly notes that there is no reference to the recording of images in the '085 Patent, the issue of whether the video signals are capable of being recorded again goes to a characteristic of the video signal, as opposed to the television camera itself.

As set forth above, the Court construes the term "television camera" to mean "a camera that generates video signals."

c. *video signal*

Elbex asserts that "video signal" be defined as "a signal which represents images" (Pl.'s Mem. at 12, Ad. D), while defendant Axis proposes a definition of "a composite picture signal which is composed by adding at least a composite synchronizing signal to a picture signal." (Def.'s Mem. at 15 (citing '085 Patent, col. 3, ll. 15-17)). Elbex argues that video signals "are a standard and necessary component of any television system" and "they have a well understood meaning which is simple and straightforward." (Pl.'s Mem. at 12). Since there is no indication that any specialized meaning was intended, plaintiff asserts that the disputed term is not ambiguous and that it need not be construed. Accordingly, plaintiff proposes a definition that is "simply the ordinary meaning of the term," consistent with the claim language and with the understanding of one skilled in the relevant art. (Id .) Plaintiff opposes Axis' definition, arguing that it improperly "import[s] extraneous limitations from the preferred embodiment" when it is clear that the inventor did not intend to limit the definition or disavow other embodiments. (Id. at 13; Pl.'s Reply at 6). Finally, plaintiff notes that "synchronizing signals" are not mentioned anywhere else in the claim and that the term would itself need to be construed, rendering the claim less clear. (Pl.'s Mem. at 13-14).

Defendant argues simply that the explicit definition of "video signal" is found in the specification of the '085 Patent, and that Elbex's proposal is overly simple and takes the term out of the context of the invention. (Def.'s Mem. at 15). Axis further asserts that plaintiff's definition is "so overly broad that it would encompass almost any signal perceived to represent images, even those which would be completely incompatible with the claimed invention," and that its own definition, by contrast, is consistent both with the state of the art at the time of the invention and with how one skilled in the art would have understood the term. (Def.'s Resp. at 7).FN13

FN13. Defendant refers the Court to its prior discussion of analog CCTV systems (*see* Def.'s Mem. at 4-5) in support of this argument. As noted in the discussion *supra* at p. 11, patent claims can encompass technology that did not exist at the time the patent application was filed or the patent issued. *See, e.g.,*

SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d at 879. Although defendant may be correct that the type of video signal described in the specification is the type that was prevalent in the 1980s, this does not necessarily mean that the '085 Patent cannot be construed to embrace later types of video signals. Furthermore, and more importantly, the fact that this type of signal may have been prevalent at the time does not mean that the specification sets forth a *definition* of the term "video signal," in the event that it is necessary to refer to the specification to determine the meaning of this term.

Claim terms are entitled to a " 'heavy presumption' " that they carry their "ordinary and customary meaning." Teleflex, Inc. v. Ficosa N. Am. Group, 299 F.3d at 1325 (citing CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed.Cir.2002)). The claims themselves, the specification and the prosecution history, as well as dictionaries and treatises, may be used to determine the ordinary meaning of a term, but "in any event the ordinary meaning must be determined from the standpoint of a person of ordinary skill in the relevant art." *Id*. In certain instances, the presumption that the ordinary meaning applies will be overcome, such as when an inventor chose to deviate from the ordinary meaning of a term by setting forth his own definition, thus acting as his own "lexicographer," or when the usage of the term in the claim is so unclear as to necessitate resort to other sources to determine meaning. *See, e.g.,* Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d at 990. If the inventor has chosen to be his own lexicographer, he must have done so "with reasonable clarity, deliberateness, and precision" so as to give notice of the specific definition to those skilled in the art. In re Paulsen, 30 F.3d 1475, 1480 (Fed.Cir.1994) (finding that the term "computer" was not clearly redefined and that specification "merely describe[d] in a general fashion certain features and capabilities desirable in a portable computer").

The Court finds that the inventor's use of the term "video signal" does not indicate an intent to redefine the term, and instead is consistent with an understanding of the term's ordinary and customary meaning as it would be understood by one skilled in the relevant art. The court notes that the '085 Patent contains numerous references to "video signals," many of them preceding the phrase in which defendant locates its proposed definition. (*See, e.g.,* ' 085 Patent, Abstract, col. 1, ll. 16-17, 28-29, 51-52, 56-57, col. 2, ll. 64-65, col. 3, ll. 4-5). None of these references indicates any intent to define the term in a manner different from its ordinary usage; indeed, the references, particularly in the portions of the patent describing the background of the invention and summarizing it, uniformly suggest a common understanding of the term's meaning.FN14 In addition, none of the references to "video signals" that appear after the phrase at issue make mention of a "composite signal" or a "composite synchronizing signal." To the contrary, the specification describes the television camera as containing a "video signal generating circuit" that is separate from a "synchronizing signal generating circuit." (' 085 Patent, col. 3, ll. 29-31).

FN14. The Court notes that plaintiff's expert states that "the term 'video signal' is well understood by those skilled in the art." (Declaration of Richard A. Kramer, dated October 26, 2007 ("Kramer Decl."), para. 8). Defendant's expert does not state otherwise (*see* Declaration of Norbert M. Stiepel in Support of Axis' Opening Claim Construction Brief Regarding U.S. Patent Nos. 4,989,085, 4,983,864, and 4,945,4[1]7, dated October 26, 2007 ("Stiepel Decl.")). In addition, as noted above, although defendant asserts that the type of video signal described in the specification is consistent with the type prevalent in the 1980s, defendant does not contend that this would constitute the ordinary meaning of the term.

Furthermore, the phrase that defendant seeks to incorporate as the proper construction of "video signal" itself reads less like an explicit definition than a phrase setting forth "in a general fashion certain features

and capabilities desirable in" a video signal.FN15 *See* In re Paulsen, 30 F.3d at 1480. Notably, the phrase is indefinite, incorporating "etc." to indicate that a variety of possible signals could be added to the picture signal in addition to the "composite synchronizing signal." Although defendant's proposed construction attempts to address this problem by adding the modifier "at least," this merely opens the door to further uncertainty and indefiniteness. Indeed, as plaintiff observes, defendant's proposed construction would require additional interpretation, not only to answer the question of what, in addition to the "composite synchronizing signal," is added to the picture signal, but also to define the "composite synchronizing signal" itself. *See* McCarty v. Lehigh Valley R.R. Co., 160 U.S. 110, 116, 16 S.Ct. 240, 40 L.Ed. 358 (1898) (warning that "if we once begin to include elements not mentioned in the claim, in order to limit such claim, ... we should never know where to stop").

FN15. Indeed, plaintiff asserts that this language simply describes the preferred embodiment of this portion of the '085 Patent. (Pl.'s Mem. at 13).

Accordingly, the Court finds that the term "video signal" was not given a unique definition by the patent's inventor and therefore, declines to adopt defendant's proposed construction. In addition, the claim language and specification of the '085 Patent support plaintiff's proposal, "a signal which represents images," and the Court construes the term accordingly. (*See, e.g.,* '085 Patent, col. 3, ll. 6-7, col. 7, l. 38).

d. ***1st code signal***

Plaintiff's proposed construction of the term "1st code signal" is as follows: "a signal corresponding to a code allotted to a respective television camera." (Pl.'s Mem. at 15, Ad. D). Defendant's proposal is substantially similar; the only difference is the use of "camera code" instead of "code." (Def.'s Mem. at 16). Plaintiff argues that defendant's interpretation "improperly seeks to limit the claim by incorporating a limiting term from the specification," and that if the inventor had intended to so limit the claim, or had the patent examiner found it necessary to limit it, "the claim would have so stated." (Pl.'s Mem. at 16).

Defendant, meanwhile, notes that the '085 Patent's specification "repeatedly refers to the *code* of the '1st code signals' as being that of a 'camera code,' " and that no other type of code is described or enabled in the specification. (Def.'s Mem. at 16 (citing as an example '085 Patent, col. 3, ll. 49-51) (emphasis in original)). Axis further asserts that plaintiff limited itself during the prosecution of the '085 Patent when it stressed, in response to comments by the USPTO, that the invention was novel because " '[o]nly the coincidence of the original camera code and the code returned to the camera will allow the control signals to operate the camera.' " (Id., Ex. E (containing the '085 Patent's Amendment of Jan. 24, 1990)). Accordingly, defendant argues, plaintiff should not be permitted to "avoid the intrinsic record" that it created. (Id. (citing Springs Window Fashions LP v. Novo Indus., L.P., 323 F.3d 989, 995 (Fed.Cir.2003))).

In reply, plaintiff contends that defendant's proposed construction renders an otherwise clear term ambiguous. (Pl.'s Reply at 8). Plaintiff further argues that the use of the phrase "camera code" in the specification, as well as the inclusion of the phrase in the prosecution history, serve merely to distinguish that code from the 2nd code and do not refer to anything inherent in the camera. (*Id.*)

The Court has reviewed the '085 Patent and considered the parties' interpretations and finds that "1st code signal" should be defined in accordance with defendant's proposal as "a signal corresponding to a camera code allotted to a respective television camera." Turning first to the context of the claim, the usage of "1st

code signals" in claim 1 itself suggests that they relate to "camera codes." In describing the television cameras in the CCTV system, the claim states that "each camera includ[es] a circuit for generating 1st code signals allotted to a respective television camera." ('085 Patent, col. 7, ll. 30-32). The fact that the 1st code signals are generated in the cameras and allotted to the cameras supports a construction of the term as relating to a "camera code."

Furthermore, as defendant notes, the specification contains numerous references to a "camera code" when discussing the "1st code signal." (*See, e.g.,* id., col. 1, ll. 57-59 (describing a "circuit for generating 1st code signals corresponding to a camera code allotted to the television camera"), col. 3, ll. 20-22 (same), col. 3, ll. 31-34 (describing the television cameras as "allotted with specific camera codes")). The specification "is always highly relevant to the claim construction analysis.... [I]t is the single best guide to the meaning of a disputed term." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d at 1582. Plaintiff's argument that "[m]odifiers are not added to broad terms standing alone" (Pl.'s Mem. at 16) is unavailing here, where the context of the disputed term itself suggests that the code being generated by and allotted to a television camera is itself a "camera code." Indeed, contrary to plaintiff's contention that defendant's proposal renders the disputed term unclear, this construction clarifies and strengthens the understanding that the "1st code signal" refers only to information relating to the television cameras.FN16

FN16. The Court notes that although plaintiff argues that the specification's use of "camera code" is merely descriptive (Pl.'s Reply at 8), plaintiff has not explained the impact of adding the term "camera" as a modifier to "code." Neither has plaintiff identified another type of code-or indeed, the type of code in the first instance-that should be included here.

Finally, the prosecution history of the '085 Patent supports a construction of "1st code signal" as including a "camera code." In response to the USPTO Office Action dated October 25, 1989, the patentee specified that "the camera generates a code signal" and the invention was unique because "[o]nly the coincidence of the original camera code and the code returned to the camera will allow the code signals to operate the camera." (Def.'s Mem., Ex. E). The patentee further emphasized that "[t]he principle of the present invention is ... a transmission of a code *from the camera to the monitor of the receiving means and back to the camera*." (Id. (emphasis in original)). The patentee also included an "Abstract of the Disclosure," in which the invention is described as including "a circuit for generating first code signals corresponding to a camera code allotted to the television camera." (Id.) As such, the context of the claim itself, the specification, and the prosecution history all support defendant's interpretation of "1st code signal" as "a signal corresponding to a camera code allotted to a respective television camera."

e. *receiving means*

Elbex and Axis agree that this term should be construed in accordance with 35 U.S.C. s. 112, para. 6, but they disagree as to both the function of the receiving means and the corresponding structure. Plaintiff proposes that the function of the term be construed as "receiving video signals and 1st code signals" and that the corresponding structure is "a displaying device or receiving device 16 and decoder 34." (Pl.'s Mem. at 16; Pl.'s Reply at 12). Defendant proposes that the function is "receiving video signals and 1st code signals from a selected one of the plurality of remotely-controlled television cameras" and that the corresponding structure is "receiving device 16 (low pass filter 54, interface 56, and monitor 58)." (Def.'s Mem. at 18).

According to plaintiff, Axis' proposed function "reads too much" into the term, because the function is to receive something; the origin of the signals received or their path to the receiving means is irrelevant to the function. (Pl.'s Mem. at 17). Plaintiff further asserts that to the extent the issues of origin and path are relevant to the '085 Patent, they are addressed by other language in the claim. (Id.) In addition, plaintiff argues that defendant's proposed structure is excessive, in that it identifies other structural elements that are merely "components which may be included in a particular configuration of a displaying or receiving device," but which themselves do not perform the function of receiving signals. (Id.) Specifically, plaintiff asserts that receiving devices were already part of the prior art and should be understood as such, and that the claim nowhere requires a low pass filter, an interface, or a monitor. (Id. at 17-18). A receiving device can still perform the function of receiving signals even in the absence of the components identified by defendant. (Id. at 18).

Defendant argues that the inclusion of the identifying phrase "from a selected one of the plurality of remotely-controlled television cameras" is necessary "to make explicit that the signals received are only those provided from a selected television camera." (Def.'s Mem. at 18). Defendant notes that the relevant portion of the claim itself refers to "said video signals" and "said 1st code signals," and that a subsequent claim limitation refers to the fact that a television camera is selected to be connected to the receiving means. (Id. at 18-19; '085 Patent, col. 7, ll. 35-36). Furthermore, defendant asserts that plaintiff's proposal is vague and could lead to confusion over what signals are being received. (Id. at 19). In addition, defendant claims that plaintiff's definition is inconsistent with the specification and the prosecution history, both of which "emphasize that the main object of the claimed invention is to permit remote control of *only* the selected television camera that is being viewed at the time." (Id. at 19 (emphasis in Def.'s Mem.)).

As for the corresponding structure, defendant argues that its proposal is supported by the intrinsic record, pointing to FIG. 1 of the '085 Patent, which portrays an item 16, described in the specification as a "receiving device" or "displaying device," and which includes a low-pass filter 54, interface 56, and monitor 58.FN17 (Def.'s Mem. at 19 (citing ' 085 Patent, col. 5, ll. 55-61). The inclusion of these elements is necessary, defendant argues, because plaintiff's proposal of "receiving device 16 alone represents nothing more than a dash-lined box." (Id.) In addition, defendant asserts that plaintiff's inclusion of decoder 34 is improper because the specification does not clearly link decoder 34 to the receiving means. Instead, defendant contends that in FIG. 1, the decoder 34 is part of controlling device 14, and that the prosecution history demonstrates that the receiving device receives codes, presumably without the aid of a decoder. (Id. at 19-20).

FN17. The Court notes that FIG. 1 of the '085 Patent incorrectly numbers the low-pass filter, interface, and monitor as 52, 54, and 56, respectively. ('085 Patent, FIG. 1). This is apparent in light of the fact that FIG. 1 also labels the "memory" as 52 and because the specification refers to the low-pass filter 54, interface 56, and monitor 58. (*See* id., col. 5, ll. 55-61).

In reply, plaintiff asserts that the claim language in which a specific television camera is "selected" does not appear until after the phrase at issue, and thus "said video signals" and "said 1st code signals" cannot refer to a television camera that has been selected. Instead, plaintiff argues that "said" must refer only to what has already been stated in the claim at that point, i.e., "all of the signals generated by all of the television cameras." (Pl.'s Reply at 10). Plaintiff contends that defendant's reference to the prosecution history is meaningless, given that the reference does not mention the receiving means. (Id.) As for defendant's arguments about structure, plaintiff asserts that defendant incorrectly relies on FIG. 1, since drawings

depicting preferred embodiments do not limit the scope of a claim. (Id. at 11 (citing Gart v. Logitech, Inc., 254 F.3d 1334, 1342 (Fed.Cir.2001))).

Furthermore, plaintiff again argues that those skilled in the art would recognize a receiving device, thereby eliminating the need for further description, and that the low-pass filter 54 and interface 56 play no role in receiving signals. (*Id*. at 11-12 (citing Kramer Decl. para.para. 8, 9)). Finally, plaintiff argues that decoder 34 is a necessary part of the structure of the receiving means because FIG. 1 clearly demonstrates that signals go through the decoder before reaching the receiving device 16, and because one skilled in the art would understand that the decoder must receive the 1st code signal to extract its code. (*Id*. at 12). Plaintiff asserts that the receiving means and the controlling means "work in tandem and therefore share the decoder." (*Id*.)

In addition, prior to the *Markman* hearing held before this Court on December 11, 2007, the parties informed the Court of a recent decision by the Federal Circuit involving the '085 Patent, and specifically the receiving means. In Elbex Video, Ltd. v. Sensormatic Elecs. Corp., 508 F.3d 1366 (Fed.Cir.2007), the court construed the function of the receiving means, in accordance with plaintiff's proposed construction, as "the reception of video signals and first code signals." 508 F.3d at 1370. Furthermore, the court construed the corresponding structure in line with the description set forth in the specification:

"[t]he receiving device 16 includes a low-pass filter 54 [sic 52] which allows the video signals to pass and prevents the high frequency output signals of the controller device 14 from passing. The output signals of the filter 54 [sic 52] are supplied to a television receiver or monitor 58 [sic 56] via an interface 56 [sic 54] which superposes the display signals from the controller 46 on the output signals of the filter 54 [sic 52]."

Id. at 1370-71 (citing '085 Patent, col. 5, ll. 55-61) (alterations in original). The court concluded that "[t]he receiving means includes an input line, a low pass filter, an interface and a television receiver or monitor and any equivalents thereof under s. 112, para. 6." *Id*. at 1371.

At the hearing before this Court, plaintiff noted that the Federal Circuit had looked to the claim's limitation and had defined the function for the purposes of this case, and that the function described by that court was in line with plaintiff's proposal. (Tr.FN18 at 51-52). Plaintiff also argued that the *Sensormatic* decision supports its proposed structure. Specifically, plaintiff pointed to the Federal Circuit's statement that "[t]he sole purpose of th[e low-pass] filter is to 'prevent the high frequency output signals (i.e., the "second code signals") of the controller device 14 from passing.' " 508 F.3d at 1373 (citing '085 Patent, col. 5, ll. 55-58). Plaintiff asserted that although the *Sensormatic* court found earlier that the low-pass filter 54 was structure corresponding to the function of the receiving means, plaintiff nevertheless properly excluded this element from its proposed structure because the above-quoted statement makes clear that the low-pass filter has nothing to do with receiving and only deals with transmitting. (Tr. at 56-57). As for the interface 56, plaintiff pointed to the *Sensormatic* court's citation to the ' 085 Patent's specification, in which the interface 56 is described as " 'superpos[ing] the display signals from the controller 46 on the output signals of the filter 54.' " (Id. at 57). *See* 508 F.3d at 1371 (citing '085 Patent, col. 5, ll. 60-61). Accordingly, plaintiff argued, the interface has nothing to do with receiving and only overlays display signals on the video. (Tr. at 57-58). In accordance with plaintiff's proposal, the remaining structure is the receiving device 16. (*Id*. at 58). Finally, plaintiff pointed to the *Sensormatic* court's statement that "the first code signal would be received by the receiving means 16 ... and then would travel to the controlling means 14," 508 F.3d at 1372, in support of the inclusion of the decoder 34 in plaintiff's proposed structure. (Tr. at 58-59).

FN18. Citations to "Tr." refer to the transcript of the proceedings before this Court on December 11, 2007.

Defendant argued at the hearing that the function it proposes for the receiving means, which does not comport with the Federal Circuit's holding in *Sensormatic,* but which includes the phrase "from a selected one of the plurality of remotely-controlled television cameras," nevertheless provides a "more coherent" construction of the term, especially in the context of the entire patent. (*Id*. at 100). Defendant further noted that the *Sensormatic* decision clearly held that the structure of the receiving means includes "an input line, a low pass filter, an interface and a television receiver or monitor and any equivalents thereof under s. 112, para. 6." (*Id*. at 89-90, 99). *See* 508 F.3d at 1371. These elements, which are the elements of receiving device 16, correspond in large part to defendant's proposed structure. (Tr. at 99).

At the hearing, the Court questioned plaintiff's counsel whether or not the *Sensormatic* decision is binding on the current proceedings, particularly in light of the apparent contradiction in that court's holding that the structure of the receiving means contains certain elements and its later statements indicating that certain of those elements were not part of the receiving means. *Compare* 508 F.3d at 1371 (holding that "[t]he receiving means includes an input line, a low pass filter, an interface and a television receiver or monitor and any equivalents thereof under s. 112, para. 6") *with* id. at 1373 (finding that the "sole purpose" of the low-pass filter 54 is to prevent signals from passing through on the return path to the cameras) and id. at 1371 (citing to the specification of the '085 Patent, which states that the interface 56 "superposes the display signals from the controller 46 on the output signals of the filter 54"). Plaintiff's counsel argued that only a "limited portion" of the *Sensormatic* decision could be considered binding, given that the *Sensormatic* case was before the Federal Circuit on appeal from an order granting summary judgment, and not in the context of a *Markman* hearing. (Tr. at 126-27). Counsel opined that had the *Sensormatic* case been before the court on a "proper *Markman* hearing," the court would have "clarified which part of the structure performs the function." (*Id*. at 125). Counsel for defendant asserted simply that the Federal Circuit's findings as to the structure of the receiving means were "crystal clear," as set forth at page 1371 of the opinion, below a reproduction of FIG. 1 of the '085 Patent. (Id. at 140).

The Court has carefully reviewed the *Sensormatic* decision and finds it instructive in this case. As an initial matter, regardless of whether that decision is binding on this Court, plaintiff's argument that the decision is somehow entitled to less weight because it was not a formal *Markman* hearing is unavailing. Although the *Sensormatic* case was before the Federal Circuit on appeal from an order granting summary judgment of noninfringement, that court itself noted that in ruling on a claim of patent infringement, "first, the claims are construed, and second, the properly construed claims are applied to the accused devices." Elbex Video, Ltd. v. Sensormatic Elecs. Corp., 508 F.3d at 1370 (citing Acumed L.L.C. v. Stryker Corp., 483 F.3d 800, 804 (Fed.Cir.2007)). Furthermore, "[c]laim construction is a question of law that [the Federal Circuit] review[s] de novo." *Id*. (citing Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed.Cir.1998)). As such, this Court is disinclined to conclude that the *Sensormatic* court was any less thorough in construing the term "receiving means" than it would have been had the decision been rendered in the context of a *Markman* hearing.

Turning first to the *Sensormatic* court's holding that the function of the receiving means is "the reception of video signals and first code signals" (*id*. at 1370), the Court agrees that this is the proper construction of the term's function. The claim language is quite straightforward, and as plaintiff correctly notes, the claim does not indicate that a particular television camera is selected until after the receiving means is described. Indeed, whether one or one hundred television cameras send their video signals and first code signals to the

receiving means, the function of the receiving means remains the reception of the signals. As such, the Court construes the function of the "receiving means" in line with plaintiff's proposal of "receiving video signals and 1st code signals."

As for the corresponding structure, the Court first notes that the relevant perceived inconsistencies in the *Sensormatic* decision can be reconciled upon closer examination of the specification of the '085 Patent. With respect to the low-pass filter 54, although the *Sensormatic* court stated that the "sole purpose" of that filter was to "prevent[ ] the high frequency output signals" from passing, that statement was included to demonstrate that, contrary to the district court's conclusion that the structure of the receiving means was limited to a monitor, the monitor itself was insufficient to perform the functions ascribed to it. *See* 508 F.3d at 1373 (citing '085 Patent, col. 5, ll. 55-58 and noting that if the monitor alone served as the structure of the receiving means, an "inoperable system" would result). The same passage of the specification cited by the *Sensormatic* court, however, also notes that the low-pass filter 54 "allows the video signals to pass," in keeping with both parties' proposed construction that the function of the receiving means includes receiving video signals and with the *Sensormatic* court's holding that the filter is included in the corresponding structure. (*Id*. at 1371; '085 Patent, col. 5, ll. 55-56). As such, the Court construes the structure of the receiving means as including the low-pass filter 54.

The specification also supports the *Sensormatic* court's inclusion of the interface 56 in the structure of the receiving means. As noted above, the ' 085 Patent's only explicit reference to the interface describes it as "superpos[ing] the display signals from the controller 46 on the output signals of the filter 54." ('085 Patent, col. 5, ll. 60-61). The output signals of the filter 54-that is, the video signals that were allowed to pass-ultimately travel to the monitor 58, which is linked repeatedly to the receiving means in the specification. (Id., col. 5, ll. 41-45, col. 5, ll. 58-59, col. 6, ll. 57-66, col. 7, ll. 22-26). *See also* Medical Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1211 (Fed.Cir.2003) (holding that structures that were clearly linked in specification to recited function were properly found to be corresponding structures and noting that the tradeoff for the convenience of the shorthand of Section 112, paragraph 6 is the resulting "limitation of the claim to the means specified in the written description and equivalents thereof" (internal citation omitted)). However, before the video signals reach the monitor, or indeed instantaneously, the interface 56 "superposes" display information on the video signals to indicate which television camera's image is being viewed. ('085 Patent, col. 5, ll. 59-61 (setting forth that the video signals are supplied to the monitor "via an interface 56"), col. 6, ll. 62-66 (describing that the display information is superposed on the image reproduced from the video signals "on the monitor [58] of the receiving device 16").

The Court concludes that both the monitor 58 and interface 56 are necessary structure corresponding to the stated function of the receiving means. As with the low-pass filter 54, not only does the specification explicitly state that these elements are part of the receiving device (id., col. 5, ll. 55-61), but the numerous references to the monitor and the interface lead to the conclusion that both are necessary to receive the video signals, and thus constitute structure corresponding to the function of the receiving means.

As for the decoder 34, the Court notes that the *Sensormatic* court makes no mention of this element in construing the function and structure of the receiving means. Defendant is also correct that there is no "clear link" between the decoder 34 and the receiving means; indeed, the decoder is explicitly linked to the controlling device. (*Id.,* col. 4, l. 18). *See also* Elbex Video, Ltd. v. Sensormatic Elecs. Corp., 508 F.3d at 1372 (noting that after being received by the receiving device, the 1st code signals travel to the controlling device, where they are decoded and manipulated). It is well established that structure must be clearly linked to the recited function in order to qualify as structure corresponding to that function. *See, e.g.,* Medical

Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d at 1211; Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1377 (Fed.Cir.2001). As such, the Court concludes that decoder 34 is not part of the structure corresponding to the function of the receiving means.

For similar reasons, the Court departs from the *Sensormatic* court's holding that the structure includes an "input line." 508 F.3d at 1371. Although FIG. 1 of the '085 Patent depicts a line connecting the receiving means and the television cameras, there is no mention in the specification of an input line. Furthermore, the only connecting device mentioned at all appears to have a transmitting role, rather than a receiving role. (*See* '085 Patent, col. 4, ll. 3-7 (describing the code and video signals as outputted to a "predetermined transmission line"), col. 6, ll. 3-4 (describing ramifications of signals being "transmitted through a common transmission line")). Given that the only mention of any connecting line is not only not clearly linked to the function of the receiving means, and indeed appears to be linked to another function altogether, the Court declines to include an "input line" in the structure corresponding to the function of the receiving means.

In accordance with the foregoing, the Court concurs with the bulk of the Federal Circuit's construction in *Sensormatic* and construes the function of the receiving means as "receiving video signals and 1st code signals" and the corresponding structure as "receiving device 16 (low-pass filter 54, interface 56, and monitor 58)."

f. ***switching means***

Plaintiff proposes that the function of the "switching means" be defined as "selecting a remote controlled television camera to be connected to the receiving means." Plaintiff identifies the corresponding structure as "switching device 18-a switch having a plurality of fixed contacts and a movable contact adapted to be selectively connected to one of the fixed contacts; or an electronic sequential switcher commonly used in CCTV systems." (Pl.'s Mem. at 19, Ad. D). Defendant proposes that the function be defined as "selecting one of the plurality of remotely-controlled television cameras to be connected to the receiving means," and identifies the corresponding structure as "switching device 18 (a switch with a plurality of fixed contacts connected to respective transmission lines of the television cameras and a movable contact adapted to be selectively connected to one of the fixed contacts; or an electronic sequential switcher commonly used in CCTV systems." (Def.'s Mem. at 20). The difference in the parties' proposed constructions of the function is defendant's inclusion indicating that "one of the plurality" of television cameras be selected. The parties differ about the structure in that defendant specifies that the fixed contacts are "connected to the respective transmission lines of the television cameras."

In support of its proposed construction, defendant argues that the inclusion of the phrase "one of the plurality" to modify the television cameras is necessary to clarify that the selection is performed with respect to only one of the cameras. (*Id*. at 20). In support of this argument, Axis cites to the claim itself, which requires "a plurality of remote-controlled television cameras" (Def.'s Resp. at 17; *see also* '085 Patent, col. 7, l. 29), and to the specification, which indicates that the switching device "select[s] one of the transmitting device[s]." ('085 Patent, col. 3, ll. 7-10). Defendant further contends that both the specification and the prosecution history "emphasize that the main object of the claimed invention is to permit remote control and viewing of only the selected television camera." (Def.'s Mem. at 20-21). As for the structure, defendant asserts that the "fixed contacts" must be described as being connected to the "respective transmission lines of the television cameras" because that conforms with the '085 Patent's specification (id. at 21 (citing '085 Patent, col. 6, ll. 5-12)) and because this proposal demonstrates "how the 'fixed contacts' enable the switching device to select one of the television cameras." (Def.'s Resp. at 17-18).

Plaintiff argues that defendant's proposed interpretation should be rejected because the inclusion of the phrase "one of the plurality" to describe the television cameras "describes the camera; it does not define the function of the switching means." (Pl.'s Mem. at 20). Plaintiff asserts that the function of the switching device has nothing to do with whether the claim requires a plurality of cameras. (Id.) Furthermore, plaintiff contends that defendant's proposed structure is improper because the transmission lines do not perform the switching function, and it is "improper to include structure not necessary for performing the claimed function." (Id. (citing Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d at 1258, and Acromed Corp. v. Sofamor Danek Group, Inc., 253 F.3d 1371, 1382 (Fed.Cir.2001))). Plaintiff asserts that the transmission lines require no description because although they may "enable the structure that is the switching means to perform its function, ... structure which so enables is not properly identified as corresponding structure." (Pl.'s Reply at 13 (citing Asyst Techs., Inc. v. Empak, Inc., 268 F.3d 1364, 1370-71 (Fed.Cir.2001) (declining to include a communication line in the relevant structure because it was not clearly linked and was better viewed as separate structure))). Finally, plaintiff argues that the "fixed contacts" need no definition and that defendant, at any rate, does not actually provide a definition for these terms. (*Id*. at 14).

The Court finds that the function of the "switching means" should be construed as "selecting a remote-controlled television camera to be connected to the receiving means." First, the language and context of the claim makes clear that only one television camera is selected at a time, thus rendering it unnecessary to alter the description of the function as set forth in the claim itself. The claim's usage of the modifier "a" establishes that only a single television camera is connected; furthermore, the definition of the term "selecting" or "select" also clarifies that only one camera is chosen. (*See Webster's New World Dictionary, Third College Edition* 1216 (1988) (defining the transitive form of "select" as "to choose or pick out from among others")). As such, defendant's concern that clarification is needed to ensure that only one camera is selected is met by the language of the limitation itself. In addition, this construction comports with the specification and the background of the patent at issue. (*See, e.g.,* '085 Patent, col. 1, ll. 21-22 (noting that in the prior art, a CCTV system contained a "switching circuit for selecting one of the television cameras to be connected"); col. 1, ll. 68-col. 2, l. 1 (describing the invention as including a "switching means for selecting the transmitting means to be connected to the receiving means"); col. 3, ll. 7-9 (describing a "switching device 18 for selecting one of the transmitting device [s] 12 *a,*i 12 *ib,*i 12 *ic* ... and 12 *n* ")). As such, the Court construes the function of the switching means in accordance with plaintiff's proposal as "selecting a remote-controlled television camera to be connected to the receiving means."

As for the related structure, the Court notes that the parties dispute only defendant's inclusion of a description of the fixed contacts as "connected to the respective transmission lines of the television cameras." The Court must determine, then, whether the transmission lines are "clearly link[ed] or associate[d]" with the function of the switching means. *See, e.g.,* Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc., 412 F.3d at 1298. Furthermore, the transmission lines must be necessary to the function of selecting a remote-controlled television camera to be connected to the receiving means, since "structure from the written description beyond that necessary to perform the claimed function" may not be incorporated. Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d at 1258.

The Court finds that the referenced "transmission lines" are not clearly linked to the function of selecting one of the cameras to be connected to the receiving means and are not clearly part of switching device 18, which the parties agree is structure corresponding to the function of the switching means. (*See* '085 Patent, col. 5, ll. 14-20 (describing that certain signals are "transmitted to a predetermined one of the transmitting device[s] through the switching device 18 and via the transmission lines 20 *a,*i 20 *ib,*i 20 *ic* ... and 20 *n,*

located between the switching device 18 and the transmitting device selected by the switching device 18"), col. 3, ll. 11-14 (describing the transmission lines as being "for the respective transmitting devices")). FN19

FN19. The Court finds it unnecessary for the purposes of this inquiry to determine whether, in fact, the transmission lines are part of the transmitting devices. However, the Court notes that a similar type of connecting line has been found to be structure separate from both of the items between which it formed a link. *See* Asyst Techs., Inc. v. Empak, Inc., 268 F.3d at 1371.

Accordingly, the Court construes the function of the "switching means" as "selecting a remote-controlled television camera to be connected to the receiving means" and the corresponding structure as "switching device 18-a switch having a plurality of fixed contacts and a movable contact adapted to be selectively connected to one of the fixed contacts; or an electronic sequential switcher commonly used in CCTV systems."

g. *controlling means*

Plaintiff proposes that the function of the term "controlling means" be defined as "controlling the television camera whose first code signal has been received," and that the corresponding structure is a "key-pad, a plurality of switches, a joy stick, etc." (Pl.'s Mem. at 20, Ad. D). Defendant proposes that the function be construed as "controlling the television camera selected by the switching means," and that the corresponding structure is "controlling device 14 (code extractor decoder 34 (synchronizing signal separating circuit 36, horizontal scanning line counter 38, gate circuit 40, level sensor 42), control signal generator 44, memory controller 46, modulator 48, carrier signal generator 50, and memory 52)." (Def.'s Mem. at 21).

In support of its proposal, plaintiff argues that given that the novelty of the invention centers on the code signals, its proposed function properly focuses on the first code signal, which is " 'what the inventor actually invented.' " (Pl.'s Mem. at 21-22 (citing Phillips v. AWH Corp., 415 F.3d at 1316)). The switching means, plaintiff asserts, is a common component found in the prior art and is purely passive, only selecting "that camera whose first code signal has been received." (*Id*. at 22). As for its proposed structure, plaintiff contends that defendant's proposal "fails to make any meaningful distinction between the 'controlling means' and the 'control and code generator means' which follows in the claim" and which is necessarily a part of the controlling means. (*Id*.) Once the structure that actually corresponds to the control and code generator means is disregarded, plaintiff argues, only the modulator 48 and carrier signal generator 50 remain, neither of which performs the function of controlling a camera. (*Id*. at 23). As some corresponding structure must be identified, plaintiff proposes a "key-pad, a plurality of switches, a joy stick, etc.," which the operator may use to control the television cameras. (*Id*.)

Defendant argues that its interpretation of the function is supported by the claim language, noting that the claim does not indicate that the controlling means receives anything such as the1st code signal and that ascribing an additional function to the controlling means is improper. (Def.'s Mem. at 22 (citing JVW Enters., Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1331 (Fed.Cir.2005))). In addition, defendant asserts that the specification's references to the television camera being selected by the switching means support its interpretation of function. (*Id* . (citing ' 085 Patent, col. 3, ll. 7-10 (describing "a switching device 18 for selecting one of the transmitting devices ... to be connected to the controlling device 14"), col. 6, ll. 5-11)). Defendant contends as well that the specification governs the corresponding structure, noting that the controlling means appears as nothing more than a "dash-lined box" in FIG. 1. (*Id*. at 23 (citing '085

Patent, col. 4, ll. 8-41, col. 5, ll. 31-54)). Defendant faults plaintiff's proposed structure, arguing that it is not clearly linked to the recited function, and is thus improperly included as a matter of law. (Id. (citing Medical Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d at 1211-12)).

In response, plaintiff asserts that defendant's inclusion of the phrase "selected by the switching means" does not comport with the way that the invention actually operates, given that the switching means is a passive device "well known in the prior art," the function of which is merely connecting the camera that has already been selected. (Pl.'s Reply at 14 (citing '085 Patent, col. 6, ll. 45-50 (describing that the "moveable contact of the switching device 18 is connected to the predetermined one of the fixed contact[s]"))). Plaintiff disputes that it is improperly adding functions to the controlling means, arguing that it is merely defining "said television camera" because defendant has disputed its meaning. (*Id*. at 15-16). Indeed, plaintiff asserts that "said" need not be defined at all, since "that is the role of the remainder of the claim, and since which camera is controlled is not part of the description of the function of the controlling means." (*Id*. at 15). As for the corresponding structure, plaintiff argues that the items it has identified are clearly linked to the control code setting circuit, which is within the controlling means. (*Id*. at 16). Moreover, plaintiff contends that defendant's proposed structure is improper because it relies too heavily on the preferred embodiment, renders the relevant term superfluous by including structure corresponding to elements within the controlling means, and includes components unnecessary for performing the functions of the controlling means. (*Id*. at 16-18).

The Court finds that the term "said" need not be defined and construes the function of the controlling means as "controlling the television camera." As plaintiff points out, both the claim language and the specification teach that the controlling means contains other components that carry out the specific functions of the apparatus that are unique to the invention. Specifically, the control and code generator means, discussed *infra,* governs the interaction of the 1st code signals and 2nd code signals and the control signals that ensures that "only the television camera [whose] video signal is received will be remotely operated by the attendant without error." ('085 Patent, col. 1, ll. 51-53; *see also* id., col. 1, ll. 61-67). When the language describing these other components is disregarded, the controlling means alone is described merely as controlling a television camera, without any further indication as to how, specifically, the television camera is controlled. (*See* id.; id., col. 3, ll. 2-3, col. 7, ll. 4-9, 20-26).FN20 The Federal Circuit has instructed that claim limitations should be construed so as to avoid rendering any element superfluous. *See, e.g.,* Stumbo v. Eastman Outdoors, Inc., 508 F.3d 1358, 1362 (Fed.Cir.2007) (citing Merck & Co. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1372 (Fed.Cir.2005)). Accordingly, so as not to render the function of the described "control and code generator means" superfluous, the Court construes the function of the "controlling means" as "controlling the television camera."

FN20. The Court also notes that it appears that the "controlling means" is an element common to all CCTV systems such as the one at issue and was known in the prior art. The background of the '085 Patent describes the prior art as including "a controlling device for controlling the operation and coordinates of the television camera, such as up-down (tilting), left-right (panning), far-near (focusing) and wide-tele (zooming)." (Id., col. 1, ll. 18-21).

As for the related structure, the most important consideration appears to be that in light of the fact that the control and code generator means is included in the controlling means, the structure of the controlling means must include at least the structure corresponding to the control and code generator means. *See* Aristocrat Techs. Australia Pty Ltd. v. Multimedia Games, Inc., 266 Fed. Appx. 942, 947 (Fed.Cir.2008)

(noting that "the organization of [the claim at issue] requires that the structure of each of the subsidiary means-plus-function limitations must be a subset or part of the structure corresponding" to the means-plus-function limitation at issue, and stating that "higher level structure leads to subsidiary structure").FN21 As such, any structure identified as corresponding with the function of the controlling means must include, and presumably contain more than, the structure corresponding to the control and code generator means, which the Court has determined is the control signal generating circuit 44, decoder 34, controller 46, modulating circuit 48, and carrier signal generating circuit 50. (*See* discussion of control and code generator means at pp. 47-49, *infra*). As such, plaintiff's proposed structure alone is insufficient.

FN21. Indeed, plaintiff concedes that "there must be more structure which corresponds to the 'controlling means' than there is corresponding to the 'control and code generator means.' " (Pl.'s Mem. at 22).

In addition to the structure identified above, the Court finds that the controlling device 14 is structure clearly linked to the function of controlling the television cameras. (*See* '085 Patent, col. 3, ll. 2-3, col. 7, ll. 4-9, ll. 20-26). The Court notes that the components construed as structure related to the control and code generator means above-the control signal generating circuit 44, decoder 34, controller 46, modulating circuit 48, and carrier signal generating circuit 50-are all part of the controlling device 14. (*See* id., col. 4, ll. 8, 30-31, col. 5, ll. 11-14). In addition, the memory 52 is clearly part of the controlling device 14, and enables the CCTV attendant to identify which television camera to control. (*See* id., col. 5, ll. 31-34, col. 6, ll. 57-col. 7, l. 3).

As for plaintiff's proposed structure-a "key-pad, a plurality of switches, a joy stick, etc."-although they alone are insufficient to perform the function of controlling the television camera, the Court finds them to be additional necessary structure corresponding to the function of controlling the television camera. These structures are linked to the recited function (*see* id., col. 4, l. 42-col. 5, l. 4 (describing that these structures may be used to operate the control code setting circuit, which generates control codes relating to various functions of the television camera), and furthermore, it is clear that they enable the operator of the CCTV system to physically operate and control the movement of the cameras. Furthermore, plaintiff's expert states that these implements were well-known in the prior art as methods of controlling television cameras in CCTV systems. (Kramer Decl. para. 13, Ex. E). FN22 *See, e.g.,* Creo Prods., Inc. v. Presstek, Inc., 305 F.3d 1337, 1347 (Fed.Cir.2002) (noting that the court's inquiry is properly focused on "whether one skilled in the art would have understood that the specification of each patent disclosed structure capable of performing the function recited in the claim limitation").

FN22. Indeed, Mr. Kramer provides the Court with numerous examples of diagrams of CCTV systems predating the '085 Patent, all of which include some kind of physical mechanism-a keypad, switches, etc.-to control the television cameras. (*See* id., Ex. E).

In accordance with the foregoing, the Court construes the function of the "controlling means" as "controlling the television camera" and the corresponding structure as "controlling device 14 (decoder 34, control signal generating circuit 44, controller 46, modulating circuit 48, carrier signal generating circuit 50, and memory 52) and a key-pad, a plurality of switches, a joy stick, etc."

h. ***control and code generator means***

Plaintiff asserts that the function of this term should be defined as "generating control signals, generating

2nd code signals, and transmitting the control and 2nd code signals," and that the corresponding structure is "control signal generating circuit 44; decoder 34; memory controller 46; and memory 52." (Pl.'s Mem. at 24, Ad. D.). Defendant proposes that the function be construed as "(a) generating control signals to control the television camera selected by the switching means; (b) generating 2nd code signals corresponding to the 1st code signals received in the receiving means; and (c) transmitting the control signals and 2nd code signals to the selected television camera." (Def.'s Mem. at 24). Defendant proposes that the corresponding structure is "(a) control signal generating circuit 44; (b) decoder 34 (synchronizing signal separating circuit 36, horizontal scanning line counter 38, gate circuit 40, level sensor 42); (c) controller 46, modulator 48, carrier signal generator 50, switching device 18, and attendant transmission lines, including lines 20a ... 20n." (Id.)

Plaintiff argues that defendant's proposed function "reads too much" into the term, given that generating and transmitting signals are functions known in the prior art, and that defendant's proposal seeks to limit these functions by improperly including extraneous information. (Pl.'s Mem. at 24-25). As for defendant's proposed structure, plaintiff asserts that defendant includes more structure than is necessary to perform the function of generating and transmitting signals. Specifically, plaintiff points to defendant's inclusion of modulator 48, carrier signal generator 50, switching device 18, and the attendant transmission lines; plaintiff also disputes the inclusion of the components of the decoder 34, which plaintiff contends are unnecessary to performing the function of generating the 2nd code signals and are not required by the invention. (Id. at 25).

Defendant contends that the claim language itself supports each of the parts of its proposed functions and that its proposed structure is properly grounded in the specification. (Def.'s Mem. at 24 (citing relevant passages of the specification)). Defendant further argues that plaintiff's proposals are impermissibly broad and that plaintiff's proposed structure, in particular, attempts to incorporate elements not clearly linked to the recited function while at the same time ignoring certain structure identified in the specification as linked to the function of the control and code generator means. (Id. at 25).

The Federal Circuit, when construing a means-plus-function limitation containing similarly descriptive claim language, has held:

The phrase "means for" generally invokes 35 U.S.C. s. 112, para. 6, and is typically followed by the recited *function and claim limitations*. In identifying the function of a means-plus-function claim, a claimed function may not be improperly narrowed or limited beyond the scope of the claim language. Conversely, neither may the function be improperly broadened by ignoring the clear limitations contained in the claim language. The function of a means-plus-function claim must be construed to include the limitations contained in the claim language.

Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d at 1319 (internal citations omitted) (emphasis in original). That court found that the lower court had erred in construing the function of a limitation that read, in part, "means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite" as merely "rotating said wheel." *Id*. The Court finds this guidance instructive and accordingly construes the function of the "control and code generator means," in keeping with the clear language of the claim, as "generating control signals to control the television camera, generating 2nd code signals corresponding to the 1st code signals received in the receiving means, and transmitting the control signals and 2nd code signals to the television camera."

As for the corresponding structure, the parties agree that the control signal generating circuit 44, the decoder

34, and the controller 46 should be identified. The Court finds that the control signal generating circuit 44 is clearly linked to the recited function of generating control signals. ('085 Patent, col. 4, ll. 39-45). Likewise, the decoder 34 is associated because it is described in part as "generating 2nd code signals corresponding to the extracted 1st code signals." (Id., col. 4, ll. 11-12). The decoder 34, however, need not have the components ascribed to it by defendant-the synchronizing signal separating circuit 36, horizontal scanning line counter 38, gate circuit 40, or level sensor 42-as these elements are all merely descriptions of the preferred embodiment of the decoder (*see* id., col. 4, ll. 13-26 (noting that the decoder, "as shown in FIG. 3," includes the various elements; *see also* id., col. 3, ll. 18-56 (describing the preferred embodiment of the transmitting device as including elements corresponding to the disputed elements of the decoder)), and are not necessary for the function of generating 2nd code signals. (Kramer Decl. para. 15). The final agreed-upon structure, the controller 46, is also correctly identified by the parties as corresponding to the function of the control and code generator means. (*See* ' 085 Patent, col. 4, ll. 30-31, col. 5, ll. 36-37, 46-48).

The Court finds that the memory 52, identified by plaintiff as corresponding structure, is not clearly associated with the functions of generating control signals, generating 2nd code signals, or transmitting those signals. Rather, the memory 52 is described as storing information pertaining to the television cameras, including information corresponding to the 2nd code signals, which is read out by the controller 46. This information, however, is used to "generate display signals to the monitor 58" and has no relation to the function of transmitting signals to the television cameras, or to any of the other functions of the control and code generator means. (Id., col. 5, ll. 31-45; *see also* id ., col. 5, ll. 48-54 (describing that the memory 52 may be employed in an alternate method of supplying the 2nd code signals to the control signal generating circuit 44)). As such, the Court concludes that the memory 52 is not properly considered structure corresponding to any of the functions of the control and code generator means.

As for the remainder of defendant's proposed included structure, the Court finds that the modulating circuit 48 is necessary structure corresponding to the function of transmitting the control and 2nd code signals. First, the Court notes that the controller 46, identified as structure above, is not sufficient to perform the function of transmitting the signals, as it is an intermediary between the decoder 34 and the control signal generating circuit 44 (*see* id., col. 4, ll. 30-31) and a processor for the 2nd code signals. (Id., col. 5, ll. 36-37). The modulating circuit 48 and carrier signal generating circuit 50, however, are necessary to actually transmit the control signals and 2nd code signals from the controlling device. (*See* id., col. 5, ll. 11-16 (describing that carrier signals are modulated by the control and code signals and that these modulated carrier signals are transmitted to the television cameras)). Indeed, the modulating circuit 48 and the carrier signal generating circuit 50 are the only elements of structure that actually perform the task of getting the control and code signals, in the form of modulated carrier signals, "out" of the control and code generator means. Once these signals have been transmitted, however, no further structure is necessary as far as the control and code generator means is concerned. The switching device 18 and the transmission lines 20 *a* through 20 *n,* though they *assist* in carrying the signals to the television cameras, do not *send* them. (*See Webster's New World Dictionary, Third College Edition* 1421 (defining "transmit" as "to send out radio or television signals")). As such, the Court concludes that they are not properly considered structure corresponding to the control and code generator means.

In accordance with the foregoing, the Court construes the function of the "control and code generator means" as "generating control signals to control the television camera, generating 2nd code signals corresponding to the 1st code signals received in the receiving means, and transmitting the control signals and 2nd code signals to the television camera." The Court construes the corresponding structure as "control signal generating circuit 44, decoder 34, controller 46, modulating circuit 48, and carrier signal generating

circuit 50."

i. ***control signal***

Although both parties agree that "control signal" should be defined as "a signal that controls an operation of the television camera," plaintiff Elbex proposes that the camera be further defined as the one "whose first code signal has been received." (Pl.'s Mem. at 26, Ad. D). Defendant, in conformity with its proposed construction of the "controlling means," contends that "control signal" should be construed to mean "a signal that controls an operation of the television camera selected by the switching means." (Def.'s Mem. at 17). Defendant asserts that its proposal is supported by the specification and that plaintiff's proposal is incomplete and confusing because it omits reference to the receiving means and video signals and because it does not indicate what element "receives" the first code signal. (*Id*. at 18). Given that the parties' differences regarding this term center on largely the same dispute as that found in the discussion of the "controlling means"-namely, the proper definition of "said camera"-plaintiff refers the Court to its discussion of that term. (Pl.'s Mem. at 26-27). Plaintiff again asserts that the camera can only be controlled by means of the "control signal" if the second code corresponds to the first code signal received. (*Id*. at 27).

In accordance with the Court's conclusion at pp. 42-43, *supra,* that the term "said" need not be construed, the Court construes the "control signal" as "a signal that controls an operation of the television camera," without any further defining terms.

j. ***2nd code signal***

Again, both parties agree to the definition of "2nd code signal" as "a signal that corresponds to the 1st code signal." (Pl.'s Mem. at 27, Ad. D; Def.'s Mem. at 17). Defendant Axis seeks to further clarify the definition by its proposal-"a signal that corresponds to the 1st code signal received by the receiving means and extracted by the controlling means," thus adding the description of the 1st code signal. (Def.'s Mem. at 17). Defendant asserts that the added description is necessary because "additional clarification of this term would be helpful to the jury," namely, that the 2nd code signals can only be generated after the 1st code signals are received by the receiving means and extracted by the controlling means. (*Id*.) Plaintiff contends that defendant is "rewriting the claim language," in that "[w]here the 1st code signal goes and what happens to it are not part of the definition of the term." (Pl.'s Mem. at 27). Furthermore, plaintiff disputes that 2nd code signals can only be generated in the manner described by defendant, and asserts that defendant has arbitrarily assigned a definition to the term. (Pl.'s Reply at 20).

The Court finds that, based on the plain language and context of the claim, the term "2nd code signal" should be construed as "a signal that corresponds to the 1st code signal received in the receiving means." Three aspects of claim 1 lead the Court to this conclusion: first, the claim language itself clearly describes the 2nd code signals as "corresponding to the 1st code signals received in said receiving means." ('085 Patent, col. 8, ll. 3-5). *See* Phillips v. AWH Corp., 415 F.3d at 1314 (noting that "the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of [claim] terms"). Second, including the modifying phrase "received in the receiving means" ensures that the 2nd code signals are understood to correspond to the 1st code signals after they are received, and not when they are still in the television cameras. ('085 Patent, col. 7, ll. 30-32, 33-34). Finally, the inclusion of this phrase underscores the roles of the various components of the CCTV system at issue in ensuring that the connection of the 1st and 2nd code signals leads to the correct camera being controlled.

As such, the Court construes the term "2nd code signal" to mean "a signal that corresponds to the 1st code

signal received in the receiving means."

k. ***command circuit receiving said control signals and said 2nd code signals generated in said controlling means and operating said television camera in accordance with said control signals when said 2nd code signals coincide with a code allotted to said television camera***

Plaintiff asserts that this term need not be construed under 35 U .S.C. s. 112, para. 6 because the claim limitation does not use the term "means" and defendant has failed to overcome the presumption that s. 112, para. 6 does not apply absent the use of the term "means" by demonstrating that the "command circuit," as described, does not set forth adequate structure. (Pl.'s Mem. at 28). Indeed, plaintiff argues that "[e]ven without relying on the presumption, the claim should be construed as identifying sufficient structure." (Id. (citing, among other cases, Apex Inc. v. Raritan Computer, Inc., 325 F.3d at 1373 (noting that the term "circuit," particularly with a modifier before the term, often connotes recognizable structure to one skilled in the art); Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d 1311, 1320-1321 (Fed.Cir.2004) (finding that "when the structure-connoting term 'circuit' is coupled with a description of the circuit's operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art"); and Massachusetts Inst. of Tech. v. Abacus Software, 462 F.3d 1344, 1355-56 (Fed.Cir.2006) (referencing the *Apex* and *Linear* decisions))).

Defendant argues that because the term "recites purely functional language and does not recite sufficient structure for performing the recited functions," the presumption that s. 112, para. 6 does not apply has been rebutted, requiring construction consistent with a traditional "means for" term. (Def.'s Mem. at 26). Specifically, defendant notes that the only structure identified in the claim is the "command circuit" itself, which is not mentioned in the specification or in the embodiment, and which, according to defendant, was and is not a conventional CCTV component understood by one skilled in the art. (*Id*. at 26-27). Accordingly, defendant's proposal as to function is: "(a) receiving the control signals and 2nd code signals generated in the controlling means; and (b) operating the television camera selected by the switching means in accordance with the control signals when the 2nd code signals coincide with the camera code allotted to the television camera." Defendant's proposal for structure is "(a) high pass filter 60 and attendant signal transmission lines; and (b) demodulator/decoder 62, controller 66, and driver 68." (*Id*. at 25, 27 (citing '085 Patent, col. 6, ll. 13-38)).

In the event that the Court finds that this term requires construction under s. 112, para. 6, plaintiff proposes that the function be defined as "receiving control signals and 2nd code signals and operating the television camera" and that the corresponding structure is "decoder 62; controller 66; [and] driver 68." (Pl.'s Mem. at 29). Plaintiff argues that defendant's proposed function is improper because it merely recites the language of the claim, and that defendant's proposed structure unnecessarily includes the high pass filter 60 and attendant signal transmission lines, which are unnecessary for performing the recited functions. (*Id*. at 29-30). Furthermore, although claim 3 of the '085 Patent, which is indirectly dependent on claim 1, includes each of the structures in defendant's proposal, plaintiff contends that under the doctrine of claim differentiation, the presumption arises that limitations appearing in dependent claims are not present in the independent claim. (Id. at 30 (citing cases)). Defendant, meanwhile, argues that its proposals provide necessary clarification and include elements which the claim language, specification, and prosecution history indicate must be included. (Def.'s Mem. at 27-28).

As noted *supra* at pp. 9-10, absent the inclusion of the word "means," the rebuttable presumption operates that s. 112, para. 6 does not apply. *See, e. g.,* Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d at

1257. In such a situation, the burden rests on the party arguing that s. 112, para. 6 applies to demonstrate, by a preponderance of the evidence, that "the claim term fails to recite sufficiently definite structure or else recites a function without reciting sufficient structure for performing that function." Apex Inc. v. Raritan Computer, Inc., 325 F.3d at 1372. Plaintiff correctly notes that the Federal Circuit, in at least three instances, has held that the term "circuit," when accompanied by a descriptive term, connotes enough structure to avoid the application of s. 112, para. 6. A closer analysis of these cases is warranted in light of the fact that the disputed term here also includes the word "circuit."

The relevant terms at issue in *Apex Inc. v. Raritan Computer, Inc.* were "first interface circuit," "on-screen programming circuit," "second interface circuit," "programmed logic circuit," and "analog video overlay circuit." *Id.* at 1368-69. The court, while not finding it "necessary to hold that the term 'circuit' by itself always connotes sufficient structure," found that "the term 'circuit' with an appropriate identifier such as 'interface,' 'programming' and 'logic,' certainly identifies some structural meaning to one of ordinary skill in the art." *Id.* at 1373 (citing definition of term in the *Dictionary of Computing*). In *Linear Tech. Corp. v. Impala Linear Corp.,* the Federal Circuit, when determining whether the terms "first circuit," "second circuit," and "third circuit" required the application of s. 112, para. 6, referred to the definitions of the term "circuit" in various technical dictionaries and held that "when the structure-connoting term 'circuit' is coupled with a description of the circuit's operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and s. 112 para. 6 presumptively will not apply." 379 F.3d at 1320. That court further analyzed the relevant terms, finding that the claims sufficiently described the "objectives or operations" of the circuits such that a person of ordinary skill in the art would "understand the structural arrangements of circuit components." *Id.* (referencing declaration of the plaintiff's expert). Finally, the *M.I.T.* court, again citing to relevant technical dictionaries, concluded that the term "aesthetic correction circuitry" connoted sufficient structure to avoid the application of s. 112, para. 6 because the claim described the operation of the circuit. 462 F.3d at 1355-56. The court clarified that only in "unusual" circumstances would the presumption that s. 112, para. 6 did not apply be overcome. Id. at 1356.

This Court finds that the term "command circuit," when read in the context of the entire limitation, recites sufficient structure so as to avoid the application of s. 112, para. 6. First, the Court is mindful of the fact that it is defendant Axis' burden to overcome the presumption that s. 112, para. 6 does not apply, absent the inclusion of the word "means." *See, e.g.,* Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d at 1320 (faulting lower court for imposing the burden on plaintiff to demonstrate that the claim recited sufficient structure). The *M.I.T.* court noted that this presumption has seldom been overcome and that instead, " 'it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.' " 462 F.3d at 1356 (citing Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d at 1359-60).

In addition, the Court notes that the claim sufficiently describes the "objectives or operations" of the command circuit, in accordance with the Federal Circuit's prior pronouncements. Specifically, the command circuit, referencing prior limitations in the claim, is described as "receiving said control signals and said 2nd code signals generated in said controlling means and operating said television camera in accordance with said control signals when said 2nd control signals coincide with a code allotted to said television camera." ('085 Patent, col. 8, ll. 9-14). The Court also takes note of the Federal Circuit's numerous references to technical dictionaries, all of which defined the term "circuit" as connoting structure. *See, e.g.,* Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d at 1320. Furthermore, although defendant's expert asserts that the term "command circuit" would not be understood by one skilled in the art to convey specific structure

(Stiepel Decl. para. 30), plaintiff's expert asserts otherwise. (Kramer Decl. para.para. 17-19). As such, the Court concludes that defendant has failed to rebut the presumption that in the absence of the term "means" in a claim limitation, s. 112, para. 6 does not apply, and the Court declines to construe the term "command circuit" as a means-plus-function limitation.

Although the Court has determined that s. 112, para. 6 does not apply, the term at issue must still be construed. *See, e.g.,* Massachusetts Inst. of Tech. v. Abacus Software, 462 F.3d at 1357 (finding that the relevant "circuit" term was not subject to analysis under s. 112, para. 6 and remanding "to the district court to define this term with further particularity"); Apex Inc. v. Raritan Computer, Inc., 325 F.3d at 1374-75 (finding that s. 112, para. 6 did not apply to "circuit" terms and construing terms). Plaintiff has submitted evidence indicating that a "command circuit" would be understood by one skilled in the art to be a circuit containing an "independent signal ... from which ... dependent signals are controlled in a predetermined manner." (Kramer Decl., Ex. H (citing definition of "command" in the *McGraw-Hill Dictionary of Scientific and Technical Terms*)). This definition comports with the description of the "command circuit" in claim 1, in that the circuit receives control signals and 2nd code signals and then operates the television camera in accordance with (i.e., in a manner dependent upon) those signals. ('085 Patent, col. 8, ll. 8-14). *See also* Apex Inc. v. Raritan Computer, Inc., 325 F.3d at 1374-75 (construing the term "interface circuit" in accordance with dictionary definitions as "any circuit that links one type of logic system with another").

In light of the foregoing, the Court construes the "command circuit" as "a circuit FN23 containing an independent signal from which dependent signals are controlled in a predetermined manner."

FN23. The Court notes that the term "circuit" alone would be well understood by one skilled in the art to mean " 'the combination of a number of electrical devices and conductors that, when interconnected to form a conducting path, fulfill some desired function.' " *Id*. at 1373 (citing *Dictionary of Computing* 75 (4th ed.1996)).

2. *The* '864 Patent

The '864 Patent addressed difficulties encountered by the CCTV system attendant in identifying which of the various cameras in the system was transmitting images. This patent describes these difficulties as: 1) a system requiring the attendant to identify which camera is transmitting images only by reference to "the connection condition" of the device used to connect each camera to the monitor, and 2) a system in which characters identify which camera image is being viewed, but viewing and identification is made difficult by the fact that only a few characters can be used and the characters often obscure the image being viewed. ('864 Patent, col. 1, ll. 19-37). The object of the '864 Patent was to "identify easily and correctly the television camera transmitting the video signals, by generating unrestricted visual alpha numeric characters ... together with the image or picture being reproduced on the monitor." (Id., col. 1, ll. 41-47). The '864 Patent was issued on July 24, 1990 and contains seven (7) claims.

Claim one of the '864 Patent, in which all of the disputed terms appear, reads as follows, with the disputed terms emphasized and limitation numbers added for ease of reference:

A *closed circuit television apparatus* comprising:

[1] a plurality of *transmitting means* for generating *video signal* s;

[2] a *receiving means* for receiving said video signals;

[3] a *switching means* for selectively connecting said transmitting means to the receiving means;

[4] each of said transmitting means including a *television camera* to which a specific code is allotted, a circuit for generating *code signal* s corresponding to said specific code, and a circuit for *generating composite signals wherein the code signals are injected into the video signals;* and

[5] said receiving means including a *circuit* for receiving said composite signals, for extracting said code signals from the received composite signals and for generating *display signal* s identifying the television camera corresponding to the extracted code signals, and a receiver for *displaying visually information corresponding to said display signals together with reproduced images or pictures corresponding to said video signals*.

(Id., col. 5, ll. 34-52, col. 6, ll. 1-2). The parties' arguments about the meaning of each of the disputed terms are set forth below.

a. *closed circuit television apparatus*

In light of the Court's holding at pp. 16-17, *supra,* that this term states only the intended purpose and field of the invention and does not limit the claim in any way, the Court again declines to construe this term.FN24

FN24. The Court again notes that if it were to find it necessary to construe the term, defendant's proposal to insert "supervisory" and to substitute "loop" for "circuit" finds no support. (*See* discussion at p. 17 n. 11, *supra*).

b. *transmitting means/a plurality of transmitting means*

The parties agree that this term should be construed under 35 U.S .C. s. 112, para. 6, but disagree as to the scope of the term and the proper interpretation of both the function and the corresponding structure. Plaintiff proposes that the function of the transmitting means be defined as "generating video signals," and that the corresponding structure is "a television camera 28 which includes a video signal generating circuit 26." (Pl.'s Mem. at 31-32, Ad. D). Defendant proposes that the term to be construed is "a plurality of transmitting means," that the function be defined as "generating video signals from each transmitting means," and that the corresponding structure is "transmitting devices 12a ... 12n (each including a television camera 28 having a synchronizing signal generating circuit 24 and a video signal generating circuit 26)." (Def.'s Mem. at 34).

Plaintiff takes issue with defendant's proposal, noting that although defendant asserts that the phrase "a plurality of transmitting means" requires construction, Axis "does not propose any meaning for the other terms in the phrase," namely, the term "plurality." (Pl.'s Mem. at 31). Plaintiff further argues that defendant's proposal as to function makes no sense, given that it includes the very term to be defined-"transmitting means"-in the definition. (*Id*. at 32). Elbex contends that in addition to the extraneous language in the proposed function, defendant includes excess structure not necessary to perform the required function, namely, the synchronizing signal generating circuit 24. (*Id*. at 32-33).

Axis asserts that its proposed function is necessary in order to make clear that the video signals are generated from each of multiple cameras. (Def.'s Mem. at 34). Defendant also takes issue with plaintiff's proposed structure, arguing that as claim 1 requires "a plurality of" transmitting means, it is necessary to indicate as such. (*Id*.) Furthermore, defendant contends that it includes as structure those elements "associated with each of the transmitting devices" (*id*.), and that the synchronizing signal generating circuit in particular is clearly linked in the specification to the term at issue. (Def.'s Resp. at 22 (citing '864 Patent, col. 3, ll. 24-26 (describing the video signal generated as "a composite signal which is composed by adding a composite synchronizing signal to an image signal"))).

The Court finds that the proper term to be construed is "transmitting means" and that its function is best construed as "generating video signals." As an initial matter, the quantity of transmitting means-indeed, the quantity of any "means" to be construed in a "means-plus-function" inquiry-has no bearing on the function of each means, which presumably will be the same. Were this not the case, each means would require a separate analysis of its respective function and structure and would not be grouped as "a plurality of" that means. As for the function, the claim is quite straightforward, setting forth that the transmitting means are "for generating video signals" ('864 Patent, col. 5, ll. 35-36), and the Court finds that no further clarification is necessary.

As for the corresponding structure, the parties, as well as the Court, agree that the television camera 28, which includes a video signal generating circuit 26, is properly identified. (*See* id., col. 3, ll. 31-33, col. 4, ll. 1-2, 12). Although these two items are referred to in the specification as the preferred embodiment of the invention, the specification nevertheless makes clear that the video signals are generated in the video signal generating circuit, and that the television camera is not only certainly a component of the invention, but a necessary element of structure to generating the video signals. (Id.) The synchronizing signal generating circuit 24, however, contrary to defendant's proposal, plays a role only in generating synchronizing signals, which are clearly separate from the video signals at issue. (Id., col. 3, 32-35). Furthermore, the various transmitting devices 12 *a* through 12 *n* are described in a general manner, and it appears that the television camera 28 and video signal generating circuit 26, located within each transmitting device, perform the specific function of generating video signals.

Accordingly, the Court construes the function of the "transmitting means" as "generating video signals" and the corresponding structure as "a television camera 28 which includes a video signal generating circuit 26."

c. ***video signal***

The parties' arguments as to the proper construction of this term are essentially the same as those set forth in support of their respective proposals in connection with the '085 Patent. Accordingly, as it did with the '085 Patent, the Court construes "video signal" as "a signal which represents images." (See discussion at pp. 21-23, *supra*).

d. ***receiving means***

The parties agree that this term should be construed in accordance with 35 U.S.C. s. 112, para. 6, but disagree as to the function and structure. Plaintiff proposes that the function of the "receiving means" is "receiving video signals" and that the corresponding structure is "a television receiver or monitor 14." (Pl.'s Mem. at 33, Ad. D). Defendant proposes that the function be defined as "receiving video signals from a selected one of the plurality of transmitting means" and that the corresponding function is "interface 20;

television receiver or monitor 14; and display signal generating circuit 18 (memory 40, extractor/decoder 42 (synchronizing signal separator 46, horizontal scanning line counter 48, gate circuit 50, level sensor 52), controller 44)." (Def.'s Mem. at 35).

Defendant asserts that its inclusion of the phrase "from a selected one of the plurality of transmitting means" in its proposed function is necessary because of the claim's reference to " 'said' video signals" generated in the transmitting means, which the claim later specifies are selectively connected to the receiving means. (*Id.*) As the Court previously noted, however, "said video signals" cannot possibly refer to how the video signals are subsequently described in the claim, and instead refers only to the video signals referenced in the phrase "a plurality of transmitting means for generating video signals." ('864 Patent, col. 5, ll. 35-36). Defendant's remaining arguments in support of its proposal as to function are without merit, and, mindful that s. 112, para. 6 "does not permit limitation of a means-plus-function claim by adopting a function different from that explicitly recited in the claim," Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d at 1258, the Court accordingly construes the function of the "receiving means" as "receiving video signals."

Turning to the proper identification of the structure corresponding to the function of the receiving means, defendant argues that the elements it includes in its proposal are necessary because they are linked to the function in the specification-particularly in the various drawings depicting the embodiments-and because plaintiff's proposal improperly seeks to broaden the scope of the claim. (Def.'s Mem. at 35-36). Defendant notes that claim 1 later clarifies that the display signal generating circuit 18, in particular, is part of the receiving means. (*Id.* at 36).

In response, plaintiff argues that defendant's proposed structure includes elements not necessary to performing the function of receiving video signals. Specifically, plaintiff asserts that the interface and display signal generating circuit are not necessary components of a receiver or monitor (Pl.'s Mem. at 34), and indeed, the interface 20 is described in the specification as performing a function different from that of receiving video signals, namely "composing an output signal of the display signal generating circuit 18 with the video signal." ('864 Patent, col. 3, ll. 17-19; Pl.'s Reply at 23). Even if a display signal generating circuit was necessary to receive video signals, plaintiff contends that such circuit need not include the components attributed to it by Axis. (Pl.'s Mem. at 34-35 (noting that language describing both the display signal generating circuit 18 and the extractor/decoder 42 is permissive-employing the words "may comprise"-and not mandatory)). Finally, plaintiff asserts that the mere fact that the claim later indicates that certain elements are part of the receiving means does not mean that those elements are necessary to perform the function of receiving video signals. (Pl.'s Reply at 23-24).

The parties agree that the monitor 14 is structure corresponding to the function, however it be defined, of the receiving means; indeed, the monitor is at least part of the structure of this element. (*See, e.g.,* '864 Patent, col. 5, ll. 4-11). As for the display signal generating circuit 18 and its attendant components, the descriptions of this element in the specification indicate that although the circuit may be located in the receiving means (id., col. 1, ll. 58-63), the circuit itself does not play a role in receiving video signals and instead extracts code signals and generates display signals. (Id., col. 4, ll. 15-19). Finally, the interface 20 is not specifically linked to the function of receiving video signals. Instead, the interface is alternately described as "composing an output signal of the display signal generating circuit 18 with the video signal" (id., col. 3, ll. 17-19) and "superpos[ing] the display signal on the receiver or monitor 14 together with the reproduced image or picture of the corresponding television camera." (Id., col. 4, ll. 29-31). As such, the Court finds that the interface 20 is not structure corresponding to the function of receiving video signals.FN25

FN25. The Court notes that certain parallels can be drawn between the receiving means of the '864 Patent and that of the '085 Patent. In construing the '085 Patent, Court found that certain structure, including a similar "interface," was properly considered structure corresponding to the function of the receiving means. *See* discussion *supra* at pp. 32-34. However, several differences exist: 1) the specification of the '085 Patent clearly linked the elements found there to be structure to the function of the receiving means, which is not the case with the '864 Patent; 2) the item depicted as "receiving device 16" in the '085 Patent designated only a box outlining a group of other elements, whereas the '864 Patent does not specifically describe a receiving device; and 3) the Federal Circuit had occasion to construe the term "receiving means" in relation to the '085 Patent but has not interpreted the term in the '864 Patent.

In accordance with the foregoing, the Court finds that the function of the receiving means is "receiving video signals" and that the corresponding structure is "a television receiver or monitor 14."

e. *switching means*

Plaintiff Elbex asserts that the function of the switching means is "selectively connecting a transmitting means to the receiving means" and that the corresponding structure is "a switching device 16 having a plurality of fixed contacts and a movable contact; or a commonly available automatic sequencing electronic switching device." (Pl.'s Mem. at 37, Ad. D). Defendant Axis proposes that the function be construed as "selectively connecting one of the plurality of transmitting means to the receiving means" and that the corresponding structure is "switching device 16 (a switch with a plurality of fixed contacts connected to the respective transmission lines 22a, 22b, 22c, ... and 22n and a movable contact adapted to be selectively connected to one of the fixed contacts; or a commonly available automatic sequencing electronic switching device)." (Def.'s Mem. at 36).

Defendant argues that its inclusion of "one of the plurality of" to modify "transmitting means" is necessary because the claim language and specification make clear that the "selective" connecting is only performed with respect to one of the plurality of transmitting devices, and that one of the primary aims of the '864 Patent was "to enable the easy and correct identification of the selected television camera connected to the receiver or monitor." (Id. at 37 (citing '864 Patent, col. 3, ll. 13-14)). As for the corresponding structure, defendant contends that descriptions of the fixed contacts and the movable contact are necessary in light of the specification and in order to avoid jury confusion. (Id. at 37-38).

Plaintiff takes issue with defendant's proposals, arguing that they improperly expand the function beyond the language of the claim and incorporate unnecessary descriptive terms into the structure. (Pl.'s Mem. at 38). Plaintiff also asserts that at the time of the invention at issue, switches which could connect more than one camera to a receiving device "were in common use," and that neither the claim language nor the specification forecloses the inclusion of a switching means with this capability. (Pl.'s Reply at 24). The inclusion of transmission lines is unnecessary, plaintiff contends, for the same reasons set forth in plaintiff's arguments pertaining to the switching means of the ' 085 Patent. (Id.) Finally, plaintiff asserts that it is also unnecessary to describe the relation between the fixed and movable contacts in light of the fact that the automatic sequencing electronic switching device, which the parties both agree is structure corresponding to the function of the switching means, is not described as including such contacts. (Id. at 24-25).

As was the case with the switching means in the '085 Patent, the Court finds that the function of the switching means in the '864 Patent should be construed as "selectively connecting a transmitting means to

the receiving means." (*See* discussion at pp. 37-38, *supra*). The reasons previously cited by the Court still hold in this situation: 1) the claim language and nature of the '864 Patent make clear that the selection is performed with respect to only one of the transmitting means at a time, thus alleviating defendant's asserted need for clarity in this respect; and 2) the specification and described background of the invention establish that the understood role of the switching means is connecting one transmitting device at a time, that is, "selectively connecting" it. (*See* '864 Patent, col. 1, ll. 16-17, 51-53). As such, the Court finds that no further clarification is warranted.

The parties' dispute over the proposals for the structure of the switching means centers on defendant's inclusion of the transmission lines 20 *a* through 20 *n* and its description that the movable contact is "adapted to be selectively connected to one of the fixed contacts," a description which plaintiff notes is not included word-for-word in the '864 Patent. (Pl.'s Reply at 24-25). As for the transmission lines, the Court again finds that they are not structure necessary for performing the stated function of the switching means. (*See* ' 864 Patent, col. 4, l. 62-col. 5, l. 3 (describing that the fixed and movable contacts facilitate the selection of the transmitting device); *see also id.,* col. 3, ll. 19-23 (describing the transmission lines as being "for the transmitting devices")). With respect to the issue of whether defendant properly includes the description of the movable contact, the Court finds that while unlike the '085 Patent, where the description of the movable contact was contained in one sentence, the description here, spread over two sentences, still indicates that the movable contact is selectively connected to one of the fixed contacts. (*Id.,* col. 4, l.66-col. 5, l.3). This description also clarifies the operation of the switching device itself. As such, the Court finds that this description is properly included in the identification of the structure of the switching means. However, absent the '864 Patent's inclusion of the terms "adapted to be," the Court declines to include these terms in its construction.

In accordance with the foregoing, the Court construes the function of the "switching means" as "selectively connecting a transmitting means to the receiving means" and that the corresponding structure is "switching device 16, having a plurality of fixed contacts and a movable contact selectively connected to one of the fixed contacts; or a commonly available automatic sequencing electronic switching device."

f. ***television camera***

As with the term "video signal," the parties' arguments as to the proper construction of this term are essentially the same as those set forth in support of their respective proposals in connection with the '085 Patent. Accordingly, as it did with the '085 Patent, the Court construes "television camera" to mean "a camera that generates video signals." (*See* discussion at pp. 18-19, *supra*).

g. ***code signal***

Plaintiff proposes that the term "code signal" be construed as "a signal corresponding to a code allotted to a respective camera" (Pl.'s Mem., Ad. D), while defendant proposes a definition of "a signal that corresponds to a camera code allotted to a respective television camera." (Def.'s Mem. at 30). Plaintiff refers the Court to its arguments in support of its interpretation of the '085 Patent's "1st code signal," in light of the fact that the parties' proposals, and the differences between the proposals, are largely the same. (Pl.'s Mem. at 31). Indeed, the parties' dispute again centers on defendant's inclusion of the word "camera" to modify "code." FN26 Defendant argues that although the intrinsic records of the two patents are different, requiring independent construction, the specification of the ' 864 Patent nevertheless repeatedly refers to the "code signal" as a "camera code." (Def.'s Reply at 9-10; Def.'s Mem. at 30-31). Although the references to a "camera code" in the specification are fewer than in the ' 085 Patent, the specification still makes clear that

the "code signal" relates to a "camera code." (*See, e.g.,* ' 864 Patent, col. 3, ll. 50-52 (describing that the code signal generating circuit and the code setting circuit relate to "camera codes ... set one for each television camera")).

FN26. The Court notes that unlike plaintiff's proposed definition of "1st code signal" in the '085 Patent, plaintiff's proposed definition here lacks the term "television" before the term "camera." However, the claim language itself, the specification, and the prosecution history all make abundantly clear that the only type of camera at issue is a "television camera," and indeed, as noted above, plaintiff itself argues that its proposed definitions are similar enough that the Court can refer to plaintiff's discussion in relation to the '085 Patent.

Accordingly, the Court construes the term "code signal" to mean "a signal that corresponds to a camera code allotted to a respective television camera."

h. ***composite signal***

Plaintiff Elbex proposes that "composite signal" be defined as "a signal composed of a code signal and a video signal." (Pl.'s Mem. at 39, Ad. D). Defendant proposes a definition of "a signal composed by superposing a code signal over a video signal." (Def.'s Mem. at 31). Plaintiff argues that there is no need to deviate from the plain language of the claim, and that defendant's proposal conflates the definition of a "composite signal" with the method in which a composite signal is formed. (Pl.'s Mem. at 39; Pl .'s Reply at 25). Further, plaintiff contends that the method of forming the composite signal is already set forth in the claim itself-namely, the code signals are "injected into" the video signals-and defendant's proposal merely identifies another method of forming composite signals. (Pl.'s Mem. at 39). Defendant, however, asserts that the patent inventor chose to be his own lexicographer in this case by explicitly defining the term "composite signals" in the specification. (Def.'s Resp. at 10).

The Court finds that, contrary to defendant's proposal, "composite signal" should be construed as "a signal composed of a code signal and a video signal." The specification of the '864 Patent supports plaintiff's assertion that the term is fairly general; indeed, the video signal itself is also described at one point as a type of composite signal. ('864 Patent, col. 3, l. 24). Perhaps more importantly, however, the claim language itself does not use the term "superposing." Instead, it describes that the composite signal in this case is formed by a circuit in which the code signals are "injected into" the video signals. (*Id.,* col. 5, ll. 43-45; *see also* discussion below of the disputed term "generating composite signals wherein the code signals are injected into the video signals"). While "superposing" appears to be a relatively common term employed by the inventor to demonstrate the combining of certain elements of the patent-it describes how the video signal and the code signal are combined (*id.,* col. 4, ll. 10-14) and how the display signal is combined with the image transmitted from the television cameras (*id.,* col. 3, ll. 24-31, 57-60), "superposing" is not used to limit how the composite signal is defined.FN27

FN27. Indeed, "superposing" appears to be, at best, one method of forming a composite signal. Even were the Court to find it necessary to inquire into the method of forming such a signal, regardless of how the signals that form the composite signal are combined-either by "superposing" or "injecting"-it is far from clear that defendant's proposal of "superposing" would clarify matters at all. Use of the term arguably necessitates further inquiry into the meaning of "superposing" and whether it would be clearly understood by one skilled in the art.

Accordingly, the Court construes the term "composite signal" to mean "a signal composed of a code signal and a video signal."

i. ***generating composite signals wherein the code signals are injected into the video signals***

Plaintiff asserts that the phrase above has its plain meaning, and that defendant's proposed construction, "superposing the code signal over the video signal to generate a composite signal," improperly seeks to rewrite the claim language and to import a limitation from the description of the preferred embodiment. (Pl.'s Mem. at 38-39). Plaintiff also argues that the language of the term, which has a clear meaning, is itself supported in the specification. (*Id.;* Pl.'s Reply at 25). Defendant asserts that plaintiff, in arguing that certain terms do not require construction, attempts to "circumvent the *Markman* process," and that the terms that plaintiff contends have a "plain meaning" are far from clear. (Def.'s Resp. at 10; Def.'s Mem. at 31-32). Accordingly, defendant proposes a construction that conforms to its proposed definition for "composite signal" and which also, it argues, is in line with the specification. (Def.'s Mem. at 31-32).

In light of the Court's finding above that the proper construction of the term "composite signal" does not incorporate any reference to "superposing," the Court finds it unnecessary to construe this term as anything other than precisely what it says, that is, its clear meaning. This portion of the claim describes the method in which the composite signal is formed, which the Court's construction of "composite signal" makes clear. Accordingly, the Court construes this term in accordance with its plain meaning as "generating composite signals wherein the code signals are injected into the video signals."

j. ***circuit***

As was the case with the disputed "circuit" in the '085 Patent, the parties dispute the proper construction of the "circuit" in the '864 Patent, the full text of which reads: "a circuit for receiving said composite signals, for extracting said code signals from the received composite signals and for generating display signals identifying the television camera corresponding to the extracted code signals." ('864 Patent, col. 5, ll. 46-51). Plaintiff again asserts that in the absence of the word "means," the presumption operates that 35 U.S.C. s. 112, para. 6 does not apply, and that defendant has failed to overcome this presumption, particularly in light of plaintiff's expert's confirmation that this term would be understood to denote sufficient structure. (Pl.'s Mem. at 40). In the event that the Court finds the presumption to be overcome, plaintiff proposes that the function be defined as "receiving the composite signals; extracting the code signals from the received composite signals; [and] generating display signals," and that the corresponding structure is "decoder or extracting circuit 42; memory 40; [and] controller 44." (Id., Ad.D).

Defendant again argues that the presumption that s. 112, para. 6 does not apply has been overcome, in that the disputed term "recites purely functional language and does not recite sufficient structure for performing the recited functions." (Def.'s Mem. at 38). Defendant contends that the "generic term" "circuit" is the only structure that is identified in this phrase, and that it is insufficient because it "does not appear anywhere in the specification" of the '864 Patent in connection with the recited functions. (Id. at 38-39). Furthermore, Axis asserts that the prosecution history of the '864 Patent supports its argument that s. 112, para. 6 should apply, citing the patent examiner's initial rejection of claim 1 partly on the grounds that "the claimed extracting and generating means are met by" portions of a prior patent. (Id., Ex. G (Office Action dated Sept. 12, 1989), at 2).FN28 Defendant also argues that the "circuit" at issue would not be understood by one skilled in the art to "convey any specific structure." (Id. at 39, Stiepel Decl. para. 31).

FN28. The Court notes that although defendant includes the patent examiner's initial rejection of claim 1, it is unclear whether that claim 1 was worded the same as the claim 1 currently before the Court. Indeed, given that claim 1 was rejected, the inventor presumably reworked the language to meet the examiner's objections. As such, it is unclear whether the claim 1 that was submitted to the patent examiner contained a reference to a "circuit" or to an "extracting and generating means."

As for structure, plaintiff argues that assuming that the Court determines that s. 112, para. 6 applies, defendant has identified too much structure. Specifically, plaintiff notes that the structure identified is recited in dependent claims 5, 6, and 7 of the '864 Patent, and asserts that under the doctrine of claim differentiation, the Court should find that these elements are not part of independent claim 1. (Pl.'s Mem. at 40). Defendant responds that the structure proposed by plaintiff is "oversimplified" and omits structure identified as corresponding in the specification, and notes that the Federal Circuit has expressly held that the doctrine of claim differentiation cannot take precedence over the statutory requirements of s. 112, para. 6. (Def.'s Resp. at 24).

As noted in the discussion *supra* at pp. 9-10, absent the use of the word "means," the presumption arises that s. 112, para. 6 does not apply. The burden is on Axis, as the party asserting that s. 112, para. 6 applies, to produce evidence to rebut the presumption. Axis must demonstrate by a preponderance of the evidence either that the disputed term does not recite sufficiently definite structure or that the term recites a function without reciting structure sufficient to perform that function. *See, e.g.,* Apex Inc. v. Raritan Computer, Inc., 325 F.3d at 1371-72. The Federal Circuit has held that "it is clear that the term 'circuit,' by itself connotes some structure." Id. at 1373 (referencing definition of "circuit" in the *Dictionary of Computing* as "the combination of a number of electrical devices and conductors that, when interconnected to form a conducting path, fulfill some desired function").

In this situation, as with the "circuit" at issue in the '085 Patent, the Court finds that in light of the fact that the term appears together with a description of its operation, the claim has recited sufficient structure to avoid the application of s. 112, para. 6. *See* Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d at 1320 (holding that "when the structure-connoting term 'circuit' is coupled with a description of the circuit's operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and s. 112 para. 6 presumptively will not apply"). Although the circuit described in claim 1 lacks a modifying term to describe its purpose more precisely,FN29 it is clearly described as receiving composite signals, extracting code signals from those composite signals, and generating display signals corresponding to the extracted code signals. (' 864 Patent, col. 5, ll. 46-51). As such, its "objectives" and respective "outputs" are clearly set forth, and plaintiff's expert recognized that the claim language would enable one of ordinary skill in the art to implement the claimed invention. (Kramer Decl. para.para. 22-25). Although defendant's expert states otherwise, this showing is insufficient to meet defendant's burden of rebutting the presumption that s. 112, para. 6 does not apply.

FN29. The Court notes that although the *Apex* court indicated that descriptive "identifiers" preceding the word "circuit" would strengthen a conclusion that the "circuit" would be understood to recite sufficient structure, 325 F.3d at 1373, the circuits at issue in *Linear Technology* only contained the words "first," "second," and "third" as "identifiers," which do not provide assistance in determining structure. The Federal Circuit nevertheless looked to whether the claim language clearly set forth the "objectives" and "outputs" of the circuits in holding that s. 112, para. 6 did not apply. 379 F.3d at 1320.

Accordingly, the Court finds that the claimed "circuit," which does not employ the term "means," recites sufficient structure to avoid the application of s. 112, para. 6. The Court construes the term "circuit" in accordance with Federal Circuit precedent as " 'the combination of a number of electrical devices and conductors that, when interconnected to form a conducting path, fulfill some desired function.' " Apex Inc. v. Raritan Computer, Inc., 325 F.3d at 1373 (citing *Dictionary of Computing* 75 (4th ed.1996)).

k. ***display signal***

Plaintiff Elbex proposes that the term "display signal" be defined as "a signal identifying a television camera." (Pl.'s Mem. at 40, Ad. D). Defendant Axis proposes a definition of "a signal including information identifying the television camera corresponding to extracted code signals." (Def.'s Mem. at 32). Plaintiff asserts that defendant seeks improperly to "alter the plain meaning of [a] claim term" well-understood in the art, and further that defendant's proposal actually renders the term less clear, given that ambiguity exists as to whether the phrase "corresponding to the extracted code signals" refers to "signal" or to "television camera." (Pl.'s Mem. at 41). Defendant asserts that its proposed construction clarifies both the method by which the signal identifies the television camera and which camera is identified, and that it is in line with the language of the claim and the specification. (Def.'s Mem. at 32).

The Court notes that the language of the claim itself reads: "display signals identifying the television camera corresponding to the extracted code signals." ('864 Patent, col 5, ll. 49-51). Furthermore, the vast majority of the references to a "display signal" in the specification, including in the abstract of the invention and the summary, indicate that the display signal corresponds to the code signal extracted from the television camera. (*See, e.g.,* id., Abstract (describing that the display signals "identify the television camera corresponding to the extracted code signals"), col. 1, ll. 61-63 (same), col. 2, ll. 19-20, 44-53, col. 4, ll. 15-19, 25-27, 52-56).

Indeed, the '864 Patent indicates that one of the purposes of the invention was to address a then-common problem in CCTV systems, whereby system attendants incorrectly perceived the "connection condition" of the switching device and thus mistakenly identified a camera. (Id., col. 1, ll. 19-26). The '864 Patent solves this problem by allotting code signals to each camera and generating display signals based on those code signals, so no misidentification can occur. (Id., col. 2, ll. 43-54). It is therefore an essential aspect of the '864 Patent that the display signals correspond to the code signals allotted to each particular camera, and the Court, in accordance with the plain language of the claim itself, construes the term "display signal" to mean "a signal identifying the television camera corresponding to the extracted code signal." FN30

FN30. The Court finds that defendant's inclusion of the phrase "including information" is redundant and thus unnecessary.

l. ***displaying visually information corresponding to said display signals together with reproduced images or pictures corresponding to said video signals***

Plaintiff asserts that the meaning of this phrase is plain and does not require construction. (Pl.'s Mem. at 41). Defendant, however, contends that its proposed construction, "to generate a visual display with information corresponding to the display signals superposed on images or pictures corresponding to the video signals," adds necessary clarification to the phrase and is consistent with the '864 Patent's use of the term "superposed." (Def.'s Mem. at 33 (citing '864 Patent, col. 4, ll. 57-61).

As discussed above, claim terms are entitled to a " 'heavy presumption' " that they carry their "ordinary and customary meaning." Teleflex, Inc. v. Ficosa N. Am. Group, 299 F.3d at 1325 (citing CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d at 1366). The "ordinary meaning must be determined from the standpoint of a person of ordinary skill in the relevant art." *Id*. In certain instances, the presumption that the ordinary meaning applies may be overcome, such as when the usage of the term in the claim is so unclear as to necessitate resort to other sources to determine meaning. *See, e.g.,* Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d at 990. If the inventor has chosen to be his own lexicographer, he must have done so "with reasonable clarity, deliberateness, and precision" so as to give notice of the specific definition to those skilled in the art. In re Paulsen, 30 F.3d at 1480.

In this case, the Court finds no reason to depart from the ordinary meaning of the terms in the limitation in dispute. Although the specification employs the term "superpose" at certain points (*see* '864 Patent, col. 4, ll. 24-32, 57-61, col. 5, ll. 17-21), it also employs the terms "together with" to describe the same thing. (*See* id., col. 1, ll. 41-47, 63-66, col. 4, ll. 24-32). More fundamentally, the claim language itself is clear and unambiguous, and provides no indication that the inventor sought to define any of the terms-particularly the terms "together with"-in a manner different from what would ordinarily be understood. As such, the Court construes the term as meaning exactly what it says-"displaying visually information corresponding to said display signals together with reproduced images or pictures corresponding to said video signals."

3. *The* '417 Patent

The '417 Patent sought to improve the then-existing method of controlling the tilting, panning, focusing, and zooming capabilities of cameras in a CCTV system. Previously, the attendant was required to change manually the coordinates of a camera to tilt, pan, focus, or zoom the camera, which the inventor described as a "laborious" process. ('417 Patent, col. 1, ll. 36-43). The purpose of the '417 Patent was to provide a CCTV apparatus that included "a television camera which can be preset to observe a multi predetermined specified object or scene with ease," as well as to eliminate the need to "transmit the coordinates values to the television camera or from the television camera to a controlling device." (Id., col. 1, ll. 46-55). The ' 417 Patent was issued on July 31, 1990 and contains three (3) claims.

Claim three of the '417 Patent, in which all of the disputed terms appear, reads as follows, with the disputed terms emphasized and limitation numbers added for ease of reference:

A *closed circuit television apparatus* comprising:

[1] a *television camera* for transmitting *video signal* s;

[2] a monitoring device for receiving the video signals from said television camera and for displaying a picture corresponding to the video signals;

[3] a controlling device for generating a command to control said television camera;

[4] said television camera including:

[5] imaging means for generating video signals;

[6] *driving means* adapted to the imaging means to be rotated in order to change the *coordinates positions of [the] imaging means;*

[7] *detecting means* for detecting the angle of the coordinates positions of said imaging means as electrical signals;

[8] *memory means* in which information is stored and from which the information is read out, and

[9] *controlling means* for receiving a command to store control information for setting said imaging means in a predetermined coordinates position, for storing output signals of said detecting means as the control information in said memory means corresponding to the store command upon receipt thereof, for reading out from said memory means the control information corresponding to the change command upon receipt thereof, and for operating said driving means until the output signals of said detecting means coincide with the read-out control information,

[10] said controlling device including a circuit for generating *control signal* s each having a frequency corresponding to the kind of control, a circuit for generating *carrier signal* s each having a frequency higher than the frequency of each video signal, and a modulating circuit for *modulating the carrier signals by the control signals,* and said controlling means including a filter for receiving the modulated carrier signals generated in said controlling device, and for extracting the carrier signals, a decoder for demodulating the control signals from the extracted carrier signals and for generating signals corresponding to the demodulated signals, and a controller for storing, when the signals corresponding to the store command are received from said decoder, the output signals of said detecting means as the control information in said memory means, for reading out from said memory means, when the signals corresponding to the change command are received from said decoder, the control information corresponding to the change command, and for operating said driving means until the output signals of said detecting means coincide with the readout [sic] control information.

(Id., col. 7, ll. 51-52, col. 8, ll. 1-51). The parties' arguments about the meaning of each of the disputed terms are set forth below.

a. *closed circuit television apparatus*

In light of the Court's holding at p. 16-17, *supra,* that this term states only the intended purpose and field of the invention and does not limit the claim in any way, the Court again declines to construe this term. (*See also* discussion *supra* at p. 58).

b. *television camera*

As with the term "video signal," the parties' arguments as to the proper construction of this term are essentially the same as those set forth in support of their respective proposals in connection with the '085 and '864 Patents. Accordingly, as it did with those patents, the Court construes "television camera" to mean "a camera that generates video signals." (*See* discussions *supra* at pp. 18-19, 66-67).

c. *video signal*

The parties' arguments as to the proper construction of this term are essentially the same as those set forth in support of their respective proposals in connection with the '085 and '864 Patents. Accordingly, as it did

with those patents, the Court construes "video signal" as "a signal which represents images." (*See* discussions *supra* at pp. 21-23, 60-61).

d. ***driving means***

The parties agree that this term is written in "means-plus-function" language and thus subject to 35 U.S.C. s. 112, para. 6, but they disagree as to the proper construction of both the function and the related structure. Plaintiff Elbex proposes that the function of the driving means be construed as "changing the coordinate positions of the imaging means" and that the corresponding structure is "motors 32a, b, c, d." (Pl.'s Mem. at 42, Ad. D). Defendant Axis proposes that the function be defined as "adapted to the imaging means to be rotated in order to change the coordinates positions of the imaging means," and that the related structure is "motors 32a-32d and drivers 34a-34d." (Def.'s Mem. at 44). The parties' proposals as to function differ with respect to Axis' inclusion of the modifying phrase "adapted to the imaging means to be rotated in order to," and their proposals as to structure differ in defendant's inclusion of the "drivers 34a-34d."

Defendant asserts that its proposed function should be adopted because it is consistent with the claim language, and faults plaintiff for omitting a "significant portion" of that language in an improper attempt to broaden the function. (*Id*. at 44-45). As for structure, defendant argues that the specification makes clear that the drivers are necessary to perform the recited function and are clearly linked to it as well. (*Id*. at 45 (citing '417 Patent, col. 4, l. 65-col. 5, l. 4, col. 5, ll. 52-68)). Plaintiff, in response, characterizes defendant's proposed function as "convoluted" and that the phrase "adapted to the imaging means to be rotated" is merely a "description of the location of structure which performs the function." (Pl.'s Mem. at 42; Pl.'s Reply at 27-28). In addition, plaintiff disputes that the drivers are clearly linked to the recited function and asserts that one skilled in the art would understand that the drivers are not necessary to perform the function. (Pl.'s Mem. at 42-43). Rather, plaintiff argues, the drivers "only turn [the] motors on and off." (Pl.'s Reply at 28 (citing Kramer Decl. para. 28)).

The Court construes the function of the driving means as "changing the coordinates positions of the imaging means." The phrase "adapted to the imaging means to be rotated in order to" merely describes an aspect of the driving means itself and has no bearing on the function the driving means performs. *See, e.g.,* Versa Corp. v. Ag-Bag Int'l Ltd., 66 Fed. Appx. 853, 854-55 (Fed.Cir.2003) (declining to include similar descriptive language and construing the function of "means operatively connected to said bag pan means for vertically moving said bag pan means between its said bag loading and bag supporting positions" as "vertically moving said bag pan means between its said bag loading and bag supporting positions"). Indeed, the descriptive language at issue could be replaced by any number of phrases relating to the placement, appearance, or other physical aspects of the driving means, none of which would alter the function of the driving means itself.

As for the related structure, the Court agrees with the parties that the motors 32 *a,*i 32 *ib,*i 32 *ic,* and 32 *d* are necessary to perform the function of changing the coordinates positions of the imaging means. (*See* '417 Patent, col. 5, ll. 52-60 (stating that the motors are rotated to change "any of the coordinates position[s] such as tilting, panning, focusing and zooming"). The Court must then examine whether, as proposed by defendant, the drivers perform the claimed function and are associated with the performance of the function. *See* Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed.Cir.2002). The specification's references to the drivers are as follows: the specification sets forth that the "tilt positioning, the pan positioning, the focus positioning and the zoom positioning of the [imaging means] are positioned by motors 32 *a,*i 32 *ib,*i 32 *ic,*i 32 *id* respectively," and that "[t]hese motors are driven by their corresponding

drivers 34 *a,*i 34 *ib,*i 34 *ic,*i 34 *d*." ('417 Patent, col. 4, l. 68-col. 5, l. 4). The specification also states that command signals activate "any one of the drivers 34 *a,* 34 *b,* 34 *c,* or 34 *d,*" and that "one of the motors corresponding to the command is thereby rotated" to change the tilting, panning, focusing and zooming of the imaging means. (Id., col. 5, ll. 61-68). Plaintiff's expert Mr. Kramer states that "[d]rivers do not rotate" and that it is well-known that " 'drivers' are typically electrical devices that turn motors on and off, and therefore 'drivers' do not change position." (Kramer Decl. para. 28). Mr. Kramer further states that at the time of the issuance of the '417 Patent, it was commonly known that "the electrical drivers can either be separate or integrated within the camera device." (Id.)

The Court finds that, contrary to the declaration of plaintiff's expert, the specification establishes that the drivers are necessary to perform the function of changing the coordinates positions of the imaging means. The specification's statement that the motors are "thereby rotated" when the drivers are activated is particularly instructive, as it indicates that the motors do not operate alone without the drivers. (*See also* '417 Patent, col. 5, ll. 3-4 (stating that "[t]hese motors are driven by their corresponding drivers 34 *a,*i 34 *ib,*i 34 *ic,*i 34 *d*")). The drivers rotate the motors to change the various positions of the imaging means, and are thus an essential component to that function.

In accordance with the foregoing, the Court construes the function of the "driving means" as "changing the coordinates positions of the imaging means" and the corresponding structure as "motors 32 *a,*i 32 *ib,*i 32 *ic,*i 32 *id* and drivers 34 *a,*i 34 *ib,*i 34 *ic,*i 34 *d*."FN31

FN31. The Court notes that defendant's proposed structure does not separately list the motors and drivers and instead refers to them as "motors 32a-32d" and "drivers 34a-34d," respectively. In light of the specification's constistent separate listing of these elements, the Court follows suit.

e. *coordinates positions of the imaging means*

Plaintiff proposes that this term be construed as "coordinate positions corresponding to tilting, panning, focusing and/or zooming positions of the imaging means." (Pl.'s Mem. at 43, Ad. D). Defendant, meanwhile, asserts that the proper construction is "coordinate values corresponding to tilting, panning, focusing and zooming positions of the imaging means." (Def.'s Mem. at 42). The parties' proposals differ with respect to defendant's use of the word "values" and plaintiff's use of the combined conjunction "and/or."

Defendant asserts that its use of the term "values" renders the term more clear and is in keeping with the specification. (Def.'s Mem. at 42 (citing ' 417 Patent, col. 1, ll. 17-43, col. 3, ll. 18-24, 30-41, 47-68)). Axis further argues that plaintiff's proposal, which defines a phrase using a term in the phrase, "amounts to no definition at all." (Def.'s Resp. at 12-13). In addition, defendant contends that plaintiff's inclusion of "or" when describing the various positions of the imaging means is improper, in that it "ignores the other limitations of the claim which clearly contemplate that more than one coordinate position of the television camera can be selectively controlled." (Id. at 12).

Plaintiff, meanwhile, faults defendant for attempting improperly to substitute one term for another, and asserts that the term "coordinate[s] positions" is not ambiguous and would be easily understood by one skilled in the relevant art. (Pl.'s Mem. at 43 (citing Kramer Decl. para. 28)). Plaintiff further notes that the term "coordinates positions" is used throughout the specification. (Pl .'s Reply at 28). As for its use of "and/or," plaintiff cites to the portion of the specification that reads "[i]n operation, when for changing *any*

of the coordinates positions *such as* tilting, panning, focusing and zooming of the television camera body ..." in support of its inclusion of the word "or." (Pl.'s Mem. at 43 (emphasis in memorandum)).

The Court finds that the term "coordinates positions of the imaging means" should be construed largely in accordance with plaintiff's proposal as "coordinates positions corresponding to tilting, panning, focusing and/or zooming positions of the imaging means." First, the Court notes that the specification, including the description of the prior art, is replete with references to "coordinates positions" and to the "positions" or "positioning" of the "television camera coordinates," leading to the strong inference that the meaning of the term was commonly understood. (*See, e.g.,* '417 Patent, col. 1, ll. 28-29, col. 2, l. 55, col. 3, ll. 34-35, etc.; *see also* Kramer Decl. para. 28). Indeed, aside from the blanket assertion that the term "coordinates positions" will cause jury confusion, defendant has provided no indication that the term does not carry its ordinary meaning. *See, e.g.,* Teleflex, Inc. v. Ficosa N. Am. Group, 299 F.3d at 1325 (noting that claim terms are entitled to a " 'heavy presumption' " that they carry their "ordinary and customary meaning") (internal citation omitted).

In addition, the specification makes clear that the coordinates positions-that is, the tilting, panning, focusing, and zooming positions-can be changed individually or all together, lending support for plaintiff's proposed usage of "and/or." (*See, e.g.,* '417 Patent, col. 3, ll. 33-35 (describing a command "to change each coordinates position of the television camera 12 independently"), col. 5, ll. 52-60 (describing that when changing "any of the coordinates position[s]," control signals are sent "to rotate one of the motors 32 *a*,i 32 *ib*,i 32 *ic*,i 32 *d*"), 63-68 (describing that when "one of" the motors is rotated, "any of the functions, i.e. tilting, panning, focusing and zooming" can be adjusted)). Indeed, as a purely logical matter, in light of the parties' agreement and the Court's conclusion that multiple motors are structure corresponding to the driving means, it stands to reason that these motors may be adjusted individually or all together and still perform the function of changing the coordinates position of the imaging means.

In accordance with the foregoing, the Court construes the term "coordinates positions of the imaging means" to mean "coordinates positions corresponding to tilting, panning, focusing and/or zooming positions of the imaging means."

f. ***detecting means***

Although the parties agree that this term should be construed under 35 U.S.C. s. 112, para. 6, they disagree as to the proper construction of both the function and the corresponding structure. Plaintiff proposes that the function of the "detecting means" be defined as "detecting the angle of the coordinates positions of the imaging means" and that the related structure is "angle detector 36a, b, c, d[;] or a mechanical switch." (Pl.'s Mem. at 44, Ad. D). Defendant, meanwhile, proposes that the function be defined as "detecting the angle of the coordinates positions of the imaging means as electrical signals" and that the related structure is "angle detectors 36a-36d." (Def.'s Mem. at 45). The difference between the parties' proposals as to function is defendant's inclusion of the phrase "as electrical signals;" the parties differ as to structure in plaintiff's inclusion of the alternative structure "a mechanical switch."

Plaintiff argues that while the claim requires that the angle of the coordinates positions be detected as electrical signals, "this is not part of the description of the function of the detecting means." (Pl.'s Mem. at 44). Rather, plaintiff asserts, it is "a characteristic of the coordinate positions." (Pl.'s Reply at 28). As for the structure, plaintiff points to the specification's reference to a "mechanical switch" as an alternative to the angle detectors and also argues that one skilled in the art would recognize that such a switch was a common

structure to perform the recited function. (Pl.'s Mem. at 44 (citing '417 Patent, col. 5, ll. 11-12 and Kramer Decl. para.para. 29-32)).

Defendant, in turn, faults plaintiff for omitting the language referring to the electrical signals, arguing that this language is a requirement of the claim and comports with the specification. (Def.'s Mem. at 45; Def.'s Resp. at 26 (citing '417 Patent, col. 5, ll. 7-11)). Defendant asserts that such functional language is part of the proper construction of the function. (Def.'s Resp. at 26 (citing Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d at 1319 (holding that "[t]he function of a means-plus-function claim must be construed to include the limitations contained in the claim language"))). As for the structure, defendant disputes that the "mechanical switch" is properly included, contending that the switch is not clearly linked to the recited function and instead is "described as an alternative to electronic switch 38 for providing a synchronized output of the signals to comparator 42." (Def.'s Mem. at 45 (citing '417 Patent, col. 5, ll. 5-25)).

The Court finds that the proper construction of the "detecting means" is "detecting the angle of the coordinates positions of the imaging means as electrical signals." As an initial matter, this construction mirrors completely the clear language of the claim and the specification of the '417 Patent, including the abstract. (*See* '417 Patent, Abstract, col. 1, ll. 60-62; *see also* id., col. 5, ll. 5-11 (describing that the angle detectors generate "*voltage*" to an "electronic switch") (emphasis supplied)). Furthermore, the Court views this claim limitation as being in line with the type discussed in *Lockheed Martin Corp. v. Space Sys./Loral, Inc.,* in which the Federal Circuit held that the function of means-plus-function limitations should be construed to include the "recited *function and claim limitations*." 324 F.3d at 1319 (emphasis in original). Specifically, the court in that case overturned the district court's construction of function, finding that it improperly broadened the function by "reading out" limitations relating to *how* the function was performed. Id. at 1318-19. In this case, the phrase "as electrical signals" relates to *how* the detecting means detects the angle of the coordinates positions, and as such is properly included in a construction of the function.

As for the related structure, the Court finds that, as the parties have agreed, the angle detectors 36 *a,*i 36 *ib,*i 36 *ic,* and 36 *d* are structure corresponding to the recited function of the detecting means. (*See* '417 Patent, col. 5, ll. 5-11). As for plaintiff's inclusion of the "mechanical switch," the Court finds this element unnecessary to perform the function of detecting the angle of the coordinates positions of the imaging means. Plaintiff's expert's statement that the use of a "mechanical switch" was and is a common method for detecting angles notwithstanding (*see* Kramer Decl. para.para. 29-32), the '417 Patent does not establish that such a switch alone would be capable of performing this function. Rather, the sole reference to a mechanical switch in the specification seems to suggest that it could be substituted for the "electronic switch" mentioned above to receive voltage from the angle detectors "commensurate with the angle of rotation." ('417 Patent, col. 5, ll. 7-12). As such, the Court finds that it is an alternate component of an element of structure itself not necessary to perform the recited function.

In accordance with the foregoing, the Court construes the function of the "detecting means" as "detecting the angle of the coordinates positions of the imaging means as electrical signals" and the corresponding structure as "angle detectors 36 *a,*i 36 *ib,*i 36 *ic,*i 36 *d*."

g. *memory means*

For this term, the parties agree as to the structure of the "memory means"-"memory 48"-but disagree about the proper interpretation of its function. Plaintiff asserts that the function should be construed as "storing information" (Pl.'s Mem. at 44-45, Ad. D), and defendant proposes a construction of "storing information

and reading out information." (Def.'s Mem. at 45-46). The issue, then, is whether the memory means reads out information, in accordance with defendant's proposal.

Defendant argues that its proposed interpretation fully comports with the language of the claim, which reads "memory means in which information is stored and from which information is read out," and that plaintiff's proposal should be rejected for omitting this language. (Id. at 46 (citing '417 Patent, col. 8, ll. 14-15)). Plaintiff, meanwhile, asserts that the memory means merely stores information, and that "[s]omething else must write the information into the memory and, likewise, something else must read the information out of the memory." (Pl.'s Mem. at 45 (citing Kramer Decl. para. 33)).FN32

FN32. The Court notes that the claim language indicates that the controlling means "read[s] out from said memory means ... information." ('417 Patent, col. 8, ll. 16-23; *see also* discussion of "controlling means" at pp. 89-90, infra).

The Court finds that the clear language of the relevant claim language instructs that the memory means itself does not read out information. The use of the phrase "from which" indicates that the memory means is passive in this respect and it is the function of another element to read out information *from* the memory means. (*See* '417 Patent, col. 8, ll. 14-15). Indeed, the specification clarifies any confusion in this respect when it states that the controller 40 "reads out in synchronized sequence the information corresponding to each and all of the coordinates positions in the memory 48," which, as noted above, the parties have agreed is the structure corresponding to the function of the memory means. (Id., col. 6, ll. 51-59). As such, the Court finds that defendant's proposed function of "reading out information" is improperly attributed to the memory means. However, the claim language makes clear that the memory means must be capable of having information read out from it, and the Court accordingly construes the function of the "memory means" as "storing information to be read out." In addition, the Court agrees with the parties that the memory 48 is necessary to perform this function and that it is clearly linked to it as well. (*See* id., col. 6, ll. 22-24, 25-26).

In accordance with the foregoing, the Court construes the function of the "memory means" as "storing information to be read out" and the corresponding function as "memory 48."

h. ***controlling means***

Plaintiff asserts that the function of the "controlling means" should be construed as "receiving a store command to store control information; receiving a store command to store output signals of the detecting means as control information; receiving a change command for reading out the control information from the memory; and operating the driving means" and identifies "controller 40" as the corresponding structure. (Pl.'s Mem. at 45, Ad. D). Defendant Axis proposes the following construction for function: "(a) receiving a command from the controlling device to store control information for setting the imaging means in a predetermined coordinates position, (b) storing output signals of the detecting means as control information in the memory means corresponding to the store command upon receipt thereof, (c) reading out from the memory means the control information corresponding to a change command upon receipt thereof from the controlling device, and (d) operating the driving means until the output signals of the detecting means coincide with the read-out control information." (Def.'s Mem. at 46). As for the corresponding structure, defendant identifies "(a) high-pass filter 50, decoder 52, controller 40, and attendant signal transmission lines; (b) switch 38, controller 40, comparator 42, up/down counter 44, D/A converter 46; (c) high-pass filter

50, decoder 52, controller 40, and attendant signal transmission lines; and (d) switch 38, controller 40, comparator 42, up/down counter 44, digital-to-analog converter 46, and attendant signal transmission lines." (Id.) The parties' proposals for function differ in that defendant's proposal contains far more detail; defendant's proposed structure also contains elements not included in plaintiff's proposal.

Defendant argues that its proposal for function should be adopted because it "properly identifies the recited functions (a), (b), (c), and (d) consistent with the language of the claim." (Id.) Plaintiff's proposal, defendant asserts, ignores the claim language and oversimplifies "in hopes of obtaining a broader scope of claim coverage." (Def.'s Resp. at 27). As for the proper identification of the corresponding structure, defendant argues that plaintiff's proposal contains significant omissions, and that the specification clearly links structure in addition to the controller 40. (Id.; Def.'s Mem. at 47 (citing '417 Patent, col. 3, ll. 61-65, col. 4, l. 68-col. 5, l. 4, col. 5, ll. 13-68, col. 6, ll. 6-25)).

Plaintiff, in turn, faults defendant's proposed function for "including extraneous language instead of simply identifying the function" and asserts that the proper identification of the various functions of the controlling means does not include information relating to, for example, the ultimate use of the control information or the "manner in which the driving means operates." (Pl.'s Mem. at 46). Plaintiff contends that its proposals have "clarified the verbose claim language in order to identify the actual claimed functions of the controlling means." (Pl.'s Reply at 29). Defendant has erred in its identification of structure, plaintiff argues, because of its incorrect identification of function, and as a result, defendant's proposed structure is not necessary to performing the functions of the controlling means or indeed, in some instances, actually performs other functions. (Id .; Pl.'s Mem. at 46).

The Court finds that the function of the "controlling means" should be construed in accordance with the clear language of the claim as: "1) receiving a command to store control information for setting said imaging means in a predetermined coordinates position, 2) receiving a command to store and storing output signals of said detecting means as the control information in said memory means corresponding to the store command upon receipt thereof, 3) receiving a change command and reading out from said memory means the control information corresponding to the change command upon receipt thereof, and 4) operating said driving means until the output signals of said detecting means coincide with the read-out control information."

As set forth above, the Federal Circuit in *Lockheed Martin Corp. v. Space Sys./Loral, Inc.,* held that the function of means-plus-function limitations should be construed to include the "recited *function and claim limitations*." 324 F.3d at 1319 (emphasis in original). Again, the Court finds instructive the court's determination in that case that the district court improperly broadened the scope of the claim language by construing as the function "rotating said wheel" claim language which read in its entirety, "means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite." Id. at 1318-19. The *Lockheed Martin* court held that the proper construction of the function of the relevant means included the entirety of the claim language quoted above, warning that a function may not be improperly broadened by reading out clear limitations in the claim language. *Id.* at 1319. In this case, the claim language, which is supported by the specification-including the summary of the invention-contains clear limitations detailing the manner in which the various functions operate, which would be improper to exclude. In addition, this construction clarifies the operation of the invention, specifically, the interaction of its various components.FN33

FN33. The Court's construction also clarifies that the controlling means receives the command to store the

output signals and the change command, functions which are referenced implicitly in the claim language.

As for the corresponding structure, the Court finds that, as the parties agree, the controller 40 is clearly linked and necessary to perform all of the recited functions. (*See* '417 patent, col. 5, ll. 18-20, 35-39, 45-51). As such, the Court must determine if the controller 40 is sufficient or if any or all of defendant's proposed structure-the switch 38, comparator 42, up/down counter 44, digital-analogue converter 46, high-pass filter 50, decoder 52, and transmission lines-are necessary to perform any of the recited functions. Specifically, defendant asserts that the switch 38, comparator 42, up/down counter 44, and digital-analogue converter 46 are structure relating to the function of receiving a command to store output signals and storing those signals and, together with the attendant signal transmission lines, structure relating to the function of operating the driving means. Defendant also contends that the high-pass filter 50, decoder 52, and attendant signal transmission lines are structure relating to the both of the remaining functions, that is, receiving a command to store control information and receiving a change command and reading out control information corresponding to that command.

Beginning with the first recited function, described in brief as receiving a command to store control information, the Court finds that none of the structure recited by defendant is necessary to perform the function. The specification indicates that "[t]he storing ... of the control information [is] controlled by the controller 40," while the high-pass filter 50 and decoder 52 are described as extracting carrier signals and generating "signals corresponding to the command transmitted from the controlling device 14," respectively. (Id., col. 5, ll. 40-60, col. 6, ll. 9-11). Though these elements may play a role in the transmission of the command to store control information, only the controller 40 is described as receiving this information. Furthermore, the transmission lines are not mentioned at all in the specification as playing any role in this process. Accordingly, the Court finds that the high-pass filter 50, decoder 52, and attendant signal transmission lines are not structure properly linked with this first function. A similar review leads the Court to conclude that neither are these structure properly linked to the third function, which reads, in brief, receiving a change command and reading out control information corresponding to the change command. (See id., *see also* id., col. 6, ll. 48-50).

As for the second function, again described in shorthand as receiving a command to store output signals and storing those signals, the specification teaches that the controller 40 generates control signals to the switch 38, connects the input poles of the switch to the comparator 42, enables the counter 44 to "continue counting up or down until coincidence signals are supplied in the synchronized sequence from the comparator 42," and finally, "stores a value of the output of the counter 44 in a memory 48." (Id., col. 6, ll. 12-24). In addition, the passage prior to the one cited indicates that the signals corresponding to the store command are "transmitted from the decoder 52 to the controller 40." (Id., col. 6, ll. 9-11). In light of the fact that the receipt of the store command and the storing of the output signals are clearly ascribed to the controller 40 alone, the Court finds that the structure recited by defendant is not appropriately designated structure corresponding to this function. The same applies to the fourth and final function, described for these purposes as operating the driving means. (Id., col. 5, ll. 61-63).

In accordance with the foregoing, the Court finds that the function of the "controlling means" should be construed as "1) receiving a command to store control information for setting said imaging means in a predetermined coordinates position, 2) receiving a command to store and storing output signals of said detecting means as the control information in said memory means corresponding to the store command upon receipt thereof, 3) receiving a change command and reading out from said memory means the control

information corresponding to the change command upon receipt thereof, and 4) operating said driving means until the output signals of said detecting means coincide with the read-out control information." Furthermore, the Court finds that the corresponding structure for all of these functions is properly identified as controller 40.

i. ***control signal***

The parties' proposals for the proper construction of the "control signal" differ only slightly. Plaintiff proposes that the term be construed as "a signal that controls the imaging means" (Pl.'s Mem. at 46, Ad. D), while defendant proposes a construction of "a signal that controls the coordinates positions of the imaging means." (Def.'s Mem. at 42). The proposals differ only slightly in that defendant includes a reference to the "coordinates positions" of the imaging means.

Plaintiff asserts that the term at issue has a plain meaning that should not be altered, and that "coordinates positions" are not something capable of being controlled. (Pl.'s Mem. at 47 (citing Kramer Decl. para. 8)). Plaintiff further notes that with respect to the '085 Patent, the parties' proposed constructions of the same term overlapped in that they both stated that a control signal controls an operation of a television camera, but that defendant now seeks to define the term differently. (Id.) Defendant, meanwhile, asserts that its proposal is consistent with both the claim language and the specification of the '417 Patent and is therefore correct. (Def.'s Mem. at 42 (noting that claim 3 sets forth that the control signals are sent to the driving means, which in turn changes the coordinates positions of the imaging means, and citing '417 Patent, col. 5, ll. 52-60)).

The Court finds that the proper construction of the term "control signal" in the '417 Patent is "a signal that controls the coordinates positions of the imaging means." Turning first to the language of the claim, the Court notes that the term is not explicitly defined and is only described as "having a frequency corresponding to the kind of control," which does not provide insight into the term's meaning. ('417 Patent, col. 8, ll. 29-30). The context of the claim is more instructive, in that the control signals are described as relating to the prior-referenced "control information for setting said imaging means in a predetermined coordinates position," thus lending support to the Court's conclusion. (Id., col. 8, ll. 16-18). Furthermore, turning to the next source of information in the hierarchy of evidence, the Court notes that the specification contains numerous references to a "control signal" as a signal that controls coordinates positions. (*See, e.g.*, id., col. 1, ll. 28-31, col. 3, ll. 30-33, col. 5, ll. 52-60, col. 6, ll. 45-47). Finally, the Court does not find the parties' proposals with regard to the "control signal" of the '085 Patent dispositive, in light of the fact that the '417 Patent currently at issue deals with the specific mechanisms of the television camera not discussed in the '085 Patent.

In accordance with the foregoing, the Court construes the term "control signal" to mean "a signal that controls the coordinates positions of the imaging means."

j. ***carrier signal***

Plaintiff proposes that the "carrier signal" be construed as "a signal that is modulated or modified with an input signal" (Pl.'s Mem. at 47), while defendant puts forward a construction of "a signal that has a constant frequency higher than the maximum frequency of the video signals." (Def.'s Mem. at 43). The proposals differ fairly significantly, in that plaintiff's proposal describes a signal that is acted upon by another signal, and defendant's describes a characteristic of the signal vis-a-vis another signal.

Plaintiff asserts that a "carrier signal" is well-known in the relevant art and need not be construed, and that defendant's attempt to limit the term's meaning is improper. (Pl.'s Mem. at 47 (citing Kramer Decl. para. 40)). The ordinary meaning of the term, according to Elbex, is its proposal, "a signal that is modulated or modified with an input signal" (id.), and that there is no reason to limit the term by reference to its frequency. (Pl.'s Reply at 29). Defendant Axis argues in support of its proposal that it comports with the language of claim 3 and with the language of the specification, where, defendant argues, the inventor defined the term. (Def.'s Mem. at 43 (citing ' 417 Patent, col. 8, ll. 29-30, col. 4, ll. 39-44)). Defendant asserts that plaintiff should not be permitted to ignore the intrinsic evidence of the ' 417 Patent. (Def.'s Resp. at 13).

The Court finds that the term "carrier signal" should be construed in accordance with its ordinary meaning as viewed from the perspective of one skilled in the art as "a signal that is modulated by another signal." As noted above, claim terms are entitled to a " 'heavy presumption' " that they carry their "ordinary and customary meaning." Teleflex, Inc. v. Ficosa N. Am. Group, 299 F.3d at 1325 (citing CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d at 1366). In this instance, plaintiff's expert states that a carrier signal would be well-understood in the field and cites as support the definition of "carrier" in a technical dictionary from the time of the '417 Patent's submission. (Kramer Decl. para. 40, Ex. H (citing definition of "carrier" in the *McGraw-Hill Dictionary of Scientific and Technical Terms,* 1985, as "[t]he radio wave produced by a transmitter when there is no modulating signal, or any other wave, reoccurring series of pulses, or direct current capable of being modulated")). (*See also Webster's New World Dictionary, Third College Edition* 215 (defining "carrier" in the context of electronics as "the steady transmitted wave whose amplitude, frequency, or phase is modulated by the signal")).

Furthermore, defendant's reliance on the language of the claim and the specification, while in keeping with the procedure set forth in *Phillips,* is misplaced in this instance, where the language of the '417 Patent does not actually define the term, but rather describes it in a manner much like the manner in which the preceding "control signal" is described. As discussed above, the language of the claim does not actually provide insight as to the meaning of the term and merely discusses an aspect of it-in this case, the frequency. Accordingly, the Court finds that defendant's proposal does not set forth the proper construction of this term.

In accordance with the foregoing, the Court construes the term "carrier signal" as "a signal that is modulated by another signal ." FN34

FN34. The Court declines to include plaintiff's proposed alternate language "or modified," as one skilled in the art would easily understand the specific meaning of "modulate." (*See* dictionary definitions referenced above). In addition, plaintiff provides no support for its inclusion of the "input signal." As such, the Court adheres to the more generalized understanding that the carrier signal may be modulated by another signal, whatever its type.

k. *modulating the carrier signals by the control signals*

Plaintiff's proposed construction of the phrase "modulating the carrier signals by the control signals" is "the process of varying the carrier signals by the control signals." (Pl.'s Mem. at 47-48, Ad. D). Defendant proposes that the phrase should be construed as "varying the frequency of the carrier signals based on the control signals." (Def.'s Mem. at 43). The parties' proposals differ only slightly in defendant's inclusion of a reference to "frequency" and plaintiff's use of "by" where defendant uses "based on."

Plaintiff argues in support of its proposed construction that defendant's proposal improperly seeks to limit the process of modulating to frequency modulation, when the ordinary meaning of "modulating" encompasses several methods. (Pl.'s Mem. at 48). Neither the claim language nor the specification limits the method of modulation, plaintiff asserts, and the construction should not be limited merely because the frequency method is the only method referenced in the specification. (Id.) Defendant contends that its proposal provides clarity and is consistent with the claim language and the specification of the '417 Patent. (Def.'s Mem. at 43). Axis further asserts that plaintiff's arguments constitute an improper attempt to broaden the claim language at issue. (Def.'s Resp. at 13).

The Court finds that the term "modulating the carrier signals by the control signals" should be construed to mean "varying the frequency of the carrier signals by the control signals." As set forth in the Court's discussion of the "carrier signal" above, it is clear that carrier signals may be modulated in more than one way, which would comport with plaintiff's very general proposal. (*See also Webster's New World Dictionary, Third College Edition* 872 (defining "modulate" in the context of radio as "to vary the amplitude, frequency, or phase of (an oscillation, as a carrier wave) in accordance with some signal")). However, the language of the claim and the specification make clear that the ' 417 Patent requires a frequency-based modulation. First, claim 3 sets forth that both the control signals and the carrier signals are characterized by their frequency. ('417 Patent, col. 8, ll. 29-32). Second, the specification of the '417 Patent establishes that the method of modulation contemplated by the invention is frequency-based. (Id., col. 4, ll. 35-52 (describing that "[t]he modulating circuit 22 modulates each frequency of carrier signals, generated from a carrier signal generating circuit 24, by the control signals")). As such, the Court's construction is the one that "stays true to the claim language and most naturally aligns with the patent's description of the invention." Renishaw PLC v. Marposs Societa per Azioni, 158 F.3d at 1250.

In accordance with the foregoing, the Court construes the term "modulating the carrier signals by the control signals" as "varying the frequency of the carrier signals by the control signals."

CONCLUSION

The Court respectfully recommends that the disputed terms of the ' 085, '864, and '417 Patents be construed as set forth above.

Any objections to this Report and Recommendation must be filed with the Clerk of the Court, with a copy to the undersigned, within ten (10) days of receipt of this Report. Failure to file objections within the specified time waives the right to appeal the District Court's order. *See* 28 U.S.C. s. 636(b)(1); Fed.R.Civ.P. 6(a), 6(e), 72; Small v. Sec'y of Health and Human Servs., 892 F.2d 15, 16 (2d Cir.1989).

The Clerk is directed to send copies of this Report and Recommendation to the parties either electronically through the Electronic Case Filing (ECF) system or by mail.

SO ORDERED.