

United States District Court,
E.D. Texas, Marshall Division.

PARADOX SECURITY SYSTEMS LTD., et al,
Plaintiffs.

v.

ADT SECURITY SERVICES, INC., et al,
Defendants.

Civil Action No. 2:06-CV-462 (TJW)

Dec. 23, 2008.

Background: Patentees brought infringement action against competitors, alleging infringement of reissued patent for telephone line coupler. Competitors asserted counterclaim for alleged infringement of patent for passive infrared (PIR) detector used to address pet-triggered false alarms in home security systems.

Holdings: Construing the patent claims, the District Court, T. John Ward, J., held that:

- (1) as used in patent for telephone line coupler, term "high impedance DC load" meant a device that consumed DC electric power in the form of a direct current input and offered a high opposition to the flow of the AC current;
- (2) as used in patent for telephone line coupler, term "gated line switch" meant a circuit element that either permits or inhibits the passage of current on a line based upon the signal applied to one or more control inputs on the element;
- (3) term "series," as used in patent for telephone line coupler, meant "an end-to-end arrangement of the components in a circuit, wherein the output of each component is connected to the input of the component following it so that it is capable of having the same current flow through each component";
- (4) as used in patent for PIR detector, term "two PIR receiver arrangements" meant two passive infrared receiver subsystems, each including a lens arrangement and an IR sensor;
- (5) as used in patent for PIR detector, term "lens arrangement" meant a lens formed from a collection of elements; and
- (6) as used in patent for PIR detector, term "adjacent active zones are separated by a nonresponsive zone" meant "not all of the adjacent active zones must be separated by a nonresponsive zone."

Ordered accordingly.

39,406. Construed.

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MEMORANDUM OPINION AND ORDER

T. JOHN WARD, District Judge.

After considering the submissions and the arguments of counsel, the court issues the following order concerning the claim construction issues:

I. Introduction

Plaintiffs Paradox Security Systems, Ltd. ("Paradox"), Shmuel Hershkovitz and Pinhas Shpater (collectively, "plaintiffs") allege that defendants ADT Security Services, Inc. and Tyco Safety Products Canada, Ltd. (formerly Digital Security Controls, Ltd.), Monitronics International, Inc. and Protection One, Inc. (collectively, "defendants") infringe claims 1, 2, 5 and 11 of U.S. Patent No. RE39,406 ("the '406 patent"), reissued from U.S. Patent No. 5,751,803 ("the '803 patent"), entitled "Telephone Line Coupler." Claims 1, 25 and 11 are independent claims, wherein claim 11 is a method claim. The '406 patent has a filing date of May 12, 2000 and lists Pinhas Shpater as the sole inventor and Shmuel Hershkovitz as the assignee. The '406 patent issued on November 21, 2006.

Defendants have counterclaimed alleging Paradox infringes claims 1-8 of U.S. Patent No. 5,923,250 ("the '250 patent"), entitled "Size Discriminating Dual Element PIR Detector." The patent has a filing date of January 28, 1997 and lists Reinhart K. Pildner and David McKenzie as inventors. Digital Security Controls Ltd. is the named assignee on this patent. The '250 patent issued on July 13, 1999.

II. Background of the Technology

1. Plaintiffs' '406 Patent

The '406 patent describes a telephone line coupler used in telephone equipment such as modems and fax machines connected to a telephone line. One goal of a coupler is to protect the equipment from surges in electric voltage that may occur on the incoming telephone line. A coupler relays the signals that come on the telephone line while protecting the equipment from any surges or improper grounding that the line may suffer from. Opto-couplers use an optical path to transfer a signal, therefore isolating the electric part of the telephone line from the electric path of the equipment. The '406 patent states that prior art coupler circuits used at least four (4) opto-couplers for relaying signals between the equipment and the telephone line, thereby making the circuitry very expensive. This invention claims to cut down on the number of opto-couplers to two in implementing the same functionality.

The abstract of the patent states:

The telephone line coupler circuit has a single transmit opto-coupler whose output includes a DC bias component connected to a gate of a line seize switch for connecting a DC line seize load across the ring and tip contacts of the telephone line. The line seize switch is saturated by the transmit opto-coupler bias output and the AC component of the transmit opto-coupler output is sent over the telephone lines. The receive opto-coupler is used both for receiving communications signal and for detecting the ring signal. The band pass filter connected to the output of the receive opto-coupler may be switched to pass a ring signal frequency band or a communications frequency band. The circuit operates using two opto-coupler devices while conventional circuits require four opto-coupler devices.

'406 Patent, Abstract.

2. Defendants' '250 Patent

The '250 patent describes a passive infrared ("PIR") detector that may be capable of discriminating between small pets and intruders, thereby attempting to address the problem of false alarms in home security systems triggered by small domestic pets. The detector uses a combination of two PIR receiver arrangements—an upper receiver arrangement and a lower receiver arrangement—to monitor infrared radiation from the surveyed area. The two arrangements combine to provide two sets of alternating zones that enable evaluation of any intruder sensed. A processor evaluates the signals from sensors of the two arrangements, and determines if an alarm condition exists. With this spacing of the beams from the two arrangements, a small domestic pet of a size less than approximately two feet in height may not cause sufficient infrared radiation to be received by the sensors to produce an alarm. On the other hand, a taller human intruder may be exposed to both beams and will trigger an alarm event.

The abstract of the patent states:

A dual element PIR detector for a security system uses a series of beams in selected areas to limit the amount of radiation received from small domestic pets. A series of alternating beams define dead zones and the beams and dead zones provide size discrimination where a small domestic cat or other small pet does not have sufficient size to cause IR responses in two sensors sufficient to cause an alarm condition.

'250 Patent, Abstract.

III. General Principles Governing Claim Construction

[1] [2] "A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention." *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed.Cir.1999). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996).

[3] [4] [5] To ascertain the meaning of claims, the court looks to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. Under the patent law, the specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. A patent's claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the

invention and may define terms used in the claims. Id. "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims." *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed.Cir.2000).

[6] [7] [8] Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's claims. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed.Cir.1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics*, 952 F.2d 1384, 1388 (Fed.Cir.1992). And, although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed.Cir.1994).

[9] [10] This court's claim construction decision must be informed by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed.Cir.2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the *claims* of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312 (emphasis added) (*quoting* *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed.Cir.2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. Id. The ordinary and customary meaning of a claim term "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, i.e., as of the effective filing date of the patent application." Id. at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention. The patent is addressed to and intended to be read by others skilled in the particular art. Id.

[11] [12] The primacy of claim terms notwithstanding, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Id. Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of "a fully integrated written instrument." Id. at 1315 (*quoting* *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. Id. at 1314-17. As the Supreme Court stated long ago, "in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims." *Bates v. Coe*, 98 U.S. 31, 38, 25 L.Ed. 68 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposh Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed.Cir.1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The 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.

Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

[13] The prosecution history also continues to play an important role in claim interpretation. The prosecution history helps to demonstrate how the inventor and the PTO understood the patent. *Phillips*, 415

F.3d at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant," it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence. That evidence is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims.

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The en banc court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed.Cir.2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Id.* at 1319-24. The approach suggested by *Texas Digital*-the assignment of a limited role to the specification-was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id.* at 1320-21. According to Phillips, reliance on dictionary definitions at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of the claim terms within the context of the patent." *Id.* at 1321. Phillips emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.* What is described in the claims flows from the statutory requirement imposed on the patentee to describe and particularly claim what he or she has invented. *Id.* The definitions found in dictionaries, however, often flow from the editors' objective of assembling all of the possible definitions for a word. *Id.* at 1321-22.

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, Phillips held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

IV. Terms in Dispute-Plaintiffs' '406 Patent

A. Agreed Constructions

The parties agree to the following constructions:

1. "ring and tip connector means for connecting to telephone line ring and tip contacts and providing ring and tip signal output" is a means-plus-function claim limitation. The function recited by this limitation is "connecting to telephone line ring and tip contacts and providing ring and tip signal outputs." The means recited by this limitation is "ring and tip connectors, or equivalents thereof."
2. "a transmit opto-coupler means having a transmit signal input and output" means "a transmit opto-coupler."

Further both parties agree that no construction is required by the Court on the following previously contested terms:

1. "low level DC signal"

2. "wherein sufficient current is generated on said transmit signal output to substantially saturate said gated line switch and seize said telephone line"
3. "transmitting an isolated copy of said transmit signal output from said transmit optocoupler using circuitry separate from the line seize circuitry"
4. "low level DC output"

B. Disputed Constructions

1. high impedance DC load (Claim 1, 2 and 5)

Plaintiffs contend that this limitation does not need construction. Alternatively, they suggest that the Court adopt the meaning, "a device that consumes DC electric power in the form of a direct current input and offers a relatively high opposition to the flow of the AC current." The defendants argue that this term is indefinite. However, if the Court finds that the term is not indefinite, defendants argue that it means a "resistor having sufficiently high resistance to draw the minimum current required by a central office to seize the telephone line."

[14] As an initial matter, this term is not insolubly ambiguous so as to prevent construction. *See e.g.*, *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed.Cir.2007) (Claims are considered indefinite when they are "not amenable to construction or are insolubly ambiguous."). Defendants argue that because it "is incongruous ... to use the term 'impedance' in conjunction with 'DC load,' which refers to the flow of direct current," and because "the specification and prosecution history provide no guidance as to how high the impedance must be before it qualifies as a 'high impedance' DC load" the Court should find this term indefinite. *Response*, p. 33. In addition they point to inconsistency between plaintiffs' construction of the term in this Court and in co-pending Canadian litigation.

While it is true that the specification and the prosecution history provide little guidance on the term, the term is not as incongruous as defendants suggest. Plaintiffs point to one of the defendant's use of the same term in one its recent patent applications. The fact that the term "impedance" typically refers to opposition to flow of alternating current (AC), and here the inventor has used it in context of direct current (DC) flow simply makes the construction difficult. *See Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372 (Fed.Cir.2004) ("A claim is not indefinite merely because it poses a difficult issue of claim construction; if the claim is subject to construction, i.e., it is not insolubly ambiguous, it is not invalid for indefiniteness."). The Court finds that this term can be given a reasonable meaning. *See Young*, 492 F.3d at 1346 (stating that indefiniteness is a determination of whether those skilled in the art would understand what is claimed based primarily on the intrinsic evidence, viz., the claim language, the specification, and the prosecution history).

[15] Further, the parties dispute how broadly the Court should construe the functionality of this device. Defendants argue that the term means nothing more than a resistor that can draw enough direct current to seize the telephone line. They seem to argue that the Court should ignore the word 'impedance' as is traditionally understood in context of alternating current. They contend that plaintiffs' technical expert agreed with them that "impedance does indeed refer to resistance" in the DC context of the patent. Further, they point to claim 11, which is a method claim, contending that the functionality recited in claim 11 narrows the scope of this term as it is used in claims 1, 2, and 5. Claim 11 recites "trigger[ing] a line seize circuit connected to said telephone line to draw a minimum current required by a central office to seize the

telephone line." Therefore, defendants argue that this term as used in claims 1, 2, and 5 should also mean the same thing.

The Court finds that "high impedance DC load" could include more than a resistor, as understood by one of ordinary skill in the art. The defendants have provided no reason to read in limitations from Claim 11 into the term as used in claims 1, 2, and 5.

The Court agrees with the plaintiffs that the construction of this term could be split into two parts: (i) the "high impedance" part that is commonly understood as high opposition to the flow of the AC current and (ii) the "DC load" part that can be understood as consuming DC electric power. The Court therefore adopts most of plaintiffs' proposed construction. This term is construed as "a device that consumes DC electric power in the form of a direct current input and offers a high opposition to the flow of the AC current."

2. "gated line switch" (Claim 1, 2 and 5) and "gate input" (Claim 1, 2, and 5)

[16] Plaintiffs contend that the term "gated line switch" does not need construction as it is clearly understood by those of ordinary skill in the art. Alternatively, they suggest that the court adopt the meaning, "a switch or a switch circuit that either permits or inhibits the passage of current on a line based upon a signal applied to a 'gate input.' "

Defendants argue that term "gated line switch" was created by the inventor and is not a term of art. They argue that plaintiffs proposed construction of "gated line switch" is broad enough to encompass any kind of switch or switch circuit, and would make the terms "gated" and "gate input" meaningless. They would therefore like the Court to limit the construction to a single type of switch, namely "a field-effect transistor ("FET") switch."

Although the term "gated line switch" is uncommon in the art, the Court notes that both the terms "gate" and "switch" have well established meaning in the art. A gate is defined by the IEEE dictionary in various contexts. IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONIC TERMS, 384 (1984). It is generally understood to be an element that has the ability to permit or inhibit the passage of a signal. Defendants argue that it should be limited to the definition recited in context of a field effect transistor. While the Court agrees with the defendants that plaintiffs' proposed construction needs to be narrowed, the Court can find nothing in the specification or the prosecution history that requires this term to be limited to a field effect transistor. The Court construes the term as "a circuit element that either permits or inhibits the passage of current on a line based upon the signal applied to one or more control inputs on the element."

[17] Similarly, the parties argue the construction of the related term "gate input." Plaintiffs proposed construction is "an electronic input to the switch, for example, the gate of a transistor." Defendants propose that it be construed as: "a connection to an electrode in a field-effect transistor that modulates the current flowing through the transistor."

The Court construes this term as "an electronic input to an element, such as a switch, that modulates the current flowing through that element."

3. series (Claim 1, 2, 5, 11 and 12)

[18] Plaintiffs contend that this limitation does not need any construction. Alternatively, they suggest that the court adopt the meaning "a connection of elements in which the output of each device is connected to

the input of the unit following it." Defendants argue that this construction is overly broad. Defendants cite numerous electronics dictionaries, general purpose dictionaries, electronics reference books and textbooks, to argue that these are all in accord in defining the term "series" similarly to mean "an end-to-end arrangement of the components, as resistors, in a circuit so that the same current flows through each component."

Defendants also point to the PTO's construction of the term during reexamination proceedings of the '406 patent, citing the PTO's statement that a "series" connection requires that "only one path for electric current exists between the opto-couplers." They further contend that in a co-pending Canadian litigation, plaintiffs have argued that a series connection requires "a single path for the current flow." The main dispute between the parties seems to be with respect to how current flows through various elements that are connected in "series." Plaintiffs argue that alternating current ("AC") and direct current ("DC") flow differently and therefore requiring the same current to flow through each component is an unnecessary restriction built into defendant's proposed construction of the term. They point to Figure 1 in the specification to argue that the usage of the term by the inventor does not include such a limitation.

[19] Plaintiffs' construction of the term is overly broad given the traditional understanding of the word as well as the usage of the term throughout the specification. The Court finds that the definition provided by the defendants based on the various dictionaries is in line with the understanding of the term in the art. *See also* MCGRAW-HILL ELECTRONICS DICTIONARY, 415 (6th ed. 1997) (defining series as "an arrangement of circuit components end to end to form a single path for current"). However, the Court agrees with the plaintiffs that specification discloses an embodiment that is not consistent with the ordinary meaning of the term series. Plaintiff points to Figure 1 and text describing the connection between the "DC line seize load a line seize switch" as being in "series." '406 Patent, at 3:19-10. The Court has to take inconsistent use of the term into consideration while construing a term. *See Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 (Fed.Cir.2007) (noting that the disputed claim term has multiple ordinary meanings and adopting the ordinary meaning that includes the disclosed examples in the specification). Figure 1 depicts a preferred embodiment of the invention and is relevant to interpreting the meaning of the claim terms here. *See Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed.Cir.2002) ("The words used in the claims are interpreted in light of the intrinsic evidence of record, including the written description, the drawings, and the prosecution history."). Construing "series" to require that the same current flows through each component end to end would mean that preferred embodiment shown in Figure 1 is excluded from the construction. The Court is not persuaded that defendants have presented sufficient evidentiary support to do so. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed.Cir.1996) (stating a construction that excludes the preferred embodiment "is rarely, if ever correct and would require highly persuasive evidentiary support"); *see also Primos Inc. v. Hunter's Specialties Inc.*, 451 F.3d 841, 848 (Fed.Cir.2006) ("[W]e ... should not normally interpret a claim term to exclude a preferred embodiment."). Therefore, the Court modifies defendant's proposed construction to be inclusive of the preferred embodiment depicted in Figure 1 of the specification. The term "series" means "an end-to-end arrangement of the components in a circuit, wherein the output of each component is connected to the input of the component following it so that it is capable of having the same current flow through each component."

4. "AC signal receive means connected to said ring and tip outputs for detecting an incoming AC signal and producing an incoming AC signal output" (Claim 1) and "AC communications signal receive means connected to said ring and tip outputs for detecting an incoming AC communications signal and producing an incoming AC communications signal output" (Claim 2)

Both parties agree that this is a means-plus-function claim limitation and further agree on most of the recited function of this limitation. The Court construes the function as "detecting an incoming AC signal and producing an incoming AC signal output."

With regard to the recited means, the parties dispute the following three issues:

- (i) what meaning should be given to the recited means;
- (ii) if the Court's construction of the recited means includes both the receive and transmit optocouplers, whether plaintiffs would also be entitled to statutory equivalents under 35 USC s. 112, para. 6 with regard to the connection between the two optocouplers, given the prosecution history of the reexamination patent;
- (iii) whether a separate construction is needed for the same term in the original '803 patent and the '406 reissue patent.

[20] Plaintiffs' proposed construction of the recited means is "a receive optocoupler having an input with first and second leads and a transmit optocoupler having an output with first and second leads, wherein the second lead of the receive optocoupler is connected to the first lead of the transmit optocoupler, and wherein one of the first lead of the receive optocoupler and the second lead of the transmit optocoupler is connected to the tip output and the other is connected to the ring output to form a DC current path between the tip and ring, and equivalents thereof."

Defendants argue, that with regard to the '406 reissue patent, the construction of this term should include a two part definition "(i) a receive opto-coupler 16 and a transmit opto-coupler 20 connected together in series on the telephone line side; and (ii) a band pass filter amplifier 18 that is switchable between two frequency bands by a line seize signal."

On the first part, defendants note that the inventor, Mr. Shapter made repeated disclaimers to the PTO during the prosecution of the reissue application, limiting the scope of the claims to a series connection between the transmit and receive opto-couplers. *See, e.g.* '406 Reissue File History, Response to Non-Final Office Action, at 3 (Jul. 11, 2002); '406 Reissue File History, Interview Summary, at 1 (Mar. 17, 2003); '406 Reissue File History, Response to Non-Final Office Action, at 5 (Apr. 7, 2003); *see also* Defendants' Opposition Claim Construction Brief, Docket Entry No. 109, p. 8-10 (listing various disclaimers made by the inventor during prosecution of the reissue application). These disclaimers were made to avoid known prior art and obtain the examiner's indication of allowance of the claims. Later when the examiner once again rejected the claims, the inventor responded to the examiner stating, "the Applicant hereby withdraws his previous remarks including any concessions and statements" *See* '406 File History, Response to Non-Final Office Action, at 1 (Dec. 22, 2005). Given this prosecution history, defendants argue the patentee has narrowed the scope of the claims to a series connection between the transmit and receive opto-couplers. The Court finds that Federal Circuit case law supports defendants' argument. *See Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed.Cir.2003) ("[W]here the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender."); *Spectrum Int'l., Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1379 (Fed.Cir.1998) ("This principle applies with equal force to arguments made by a patentee to sustain the patentability of claims during reexamination"); *cf. Cordis Corp. v. Medtronic Ave, Inc.*, 511 F.3d 1157, 1177 (Fed.Cir.2008) (explaining that that for prosecution disclaimer to attach, the "alleged disavowing actions or statements made during prosecution [must] be both clear and unmistakable").

Plaintiffs respond by arguing that because the inventor withdrew all disclaimers at one point during the prosecution, those disclaimers can no longer be considered binding disavowal of claim scope by the inventor. Given the extended period of time over which the inventor continued to vehemently argue a limiting construction to the examiner, the Court refuses to simply ignore this prosecution history in light of a single remark made in response to an office action. *See Hakim v. Cannon Avent Group, PLC*, 479 F.3d 1313, 1318 (Fed.Cir.2007) ("Although a disclaimer made during prosecution can be rescinded, permitting recapture of the disclaimed scope, the prosecution history must be sufficiently clear to inform the examiner that the previous disclaimer, and the prior art that it was made to avoid, may need to be re-visited.").

On the second part of their proposed construction, defendants argue that the band pass filter amplifier is necessary for receiving an AC communications signal because it is the component that allows the communication signal through and blocks the AC ring signal, vice versa. Defendants point to sections of the specification that explain how the communication signal and ring signal are received and output. Plaintiffs respond by arguing that defendants have attempted to improperly include structure not tied to the recited function. They note that this additional functionality has been claimed in dependent claim 8, and the band pass filter disclosed corresponds to that claimed functionality. The Court agrees that the band pass filter is unnecessary to perform the recited function. The Court therefore adopts the first part of the defendants' construction as the recited means for this term: "A receive opto-coupler 16 and a transmit opto-coupler 20 connected together in series."

[21] [22] [23] Defendants also argue that plaintiffs are not entitled to any range of equivalents as to the series connection in the recited means. In general, the patentee is entitled to claim scope including equivalents to the actual means shown in the patent specification. *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*, 145 F.3d 1303, 1310 (Fed.Cir.1998) ("Both s. 112, para. 6, and the doctrine of equivalents protect the substance of a patentee's right to exclude by preventing mere colorable differences or slight improvements from escaping infringement...."). However, "just as prosecution history estoppel may act to estop an equivalence argument under the doctrine of equivalents, positions taken before the PTO may bar an inconsistent position on claim construction under s. 112, para. 6." *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed.Cir.1998) (en banc) ("Clear assertions made in support of patentability thus may affect the range of equivalents under s. 112, para. 6."); *see also Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997) ("[Equivalents under s. 112] is an application of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claim elements."). The inventor here did make clear assertions to the examiner with regard to the interpretation of this term. The Court therefore agrees with the defendants that the plaintiffs are not entitled s. 112, para. 6 equivalents with regard to the series connection between the transmit and receive opto-couplers. In this context, the term "series" shall be limited to the ordinary meaning of the term in the art: "an end-to-end arrangement of the components in a circuit so that the same current flows through each component." Plaintiffs are entitled s. 112, para. 6 equivalents with regard to other aspects of the construed means.

Finally, defendants argue that the doctrine of intervening rights, codified in 35 U.S.C. s. 252 prevents plaintiffs from reaching back and claim infringement of the original '803 patent because they made substantive changes in the claims of the '406 reissue patent during reexamination. *Bloom Eng'g Co. v. North Am. Mfg. Co.*, 129 F.3d 1247, 1250 (Fed.Cir.1997) ("the making of substantive changes in the claims is treated as an irrebuttable presumption that the original claims were materially flawed."). The defendants request the Court to construe this term in claims 1 and 2 differently for the original '803 patent and the '406 reissue patent. However, the claims 1 and 2 between the two patents are identical. The inventor did pursue a

narrowing of the original claims during the prosecution of the reissue patent, but the claims that were eventually allowed are identical to the original claims and the case law cited by defendants is misplaced. *See Bloom Eng'g Co.*, 129 F.3d at 1250 ("Unless a claim granted or confirmed upon reexamination is identical to an original claim, the patent can not be enforced against infringing activity that occurred before issuance of the reexamination certificate."). Accordingly, Defendants' request that the Court perform two different constructions of the identical claims of the '803 patent and the '406 reissue patent is denied.

5. AC ring signal detect means connected to said ring and tip outputs for detecting a telephone ring signal on said telephone line and generating a ringing output signal (Claim 2)

[24] Both parties agree that this is a means-plus-function claim limitation and agree that the recited function should be given the meaning, "detecting a telephone ring signal on said telephone line and generating a ringing output signal."

For the recited means, the plaintiffs propose the following construction: "A receive optocoupler having its input connected to the ring and tip outputs via a ring signal filter circuitry and a return path diode."

Defendants argue that plaintiffs have adopted the generic term "ring signal filter circuitry," which has no specific meaning and could encompass a broad range of circuitry, rather than what is actually disclosed in the specification. Their proposed construction of the recited means includes:

The corresponding structure is one resistor and one capacitor connected in series between the ring output 10 and one terminal of the diode side of the receive opto-coupler 16. One resistor and one capacitor is also connected in series between the tip output 11 and the other terminal of the diode side of the receive opto-coupler 16. An external diode is connected across the terminals on the diode side of the receive opto-coupler 16. The corresponding structure also includes the receive opto-coupler 16 and a band pass filter amplifier 18 that is switchable between two frequency bands by a line seize signal.

The Court notes that detailed description of the preferred embodiment along with the Figure 1 describes a "ring signal filter" that is used to support the function of detecting a telephone ring signal and generating a ringing output signal. '406 Patent, 3:43-51. Therefore, the phrase does have a specific meaning as illustrated in the specification and does not encompass a broad range of circuitry.

Defendants also contend that the specification describes a band pass filter amplifier as necessary for achieving the function recited by this limitation. Plaintiffs dispute this contention and note that this additional functionality has been claimed in dependent claim 8. The Court agrees with the plaintiffs on this point. The band pass filter is not necessary to support the functionality recited by this limitation. Plaintiff's construction is reasonable and the court adopts it as the recited means for this limitation: "A receive opto-coupler 16 having its input connected to the ring and tip outputs 10, 11 via a ring signal filter 13 and a return path diode 17, or equivalents thereof."

6. draw a minimum current required by a central office to seize the telephone line (Claim 11)

[25] Plaintiffs contend that this limitation does not need construction by the Court. Alternatively, they suggest that the court adopt the meaning "draw a current that is at least sufficient to seize a telephone line."

Defendants dispute the meaning of "minimum," and cite various dictionaries to support its ordinary meaning as being, "the least possible." Further, they argue that the inventor distinguished prior art to the

PTO on the basis of high current flow. They point out plaintiffs' construction as completely ignoring the words "required by a central office." They propose this construction: "draw the least possible current required by a central office to seize the telephone line."

Plaintiffs argue that since the claim is a "comprising" claim and the language includes "a minimum," defendants cannot justify narrowing the meaning of the word minimum to only the amount of current absolutely necessary to seize the telephone line, and not a single nanoamp more. In response, defendants cite recent Federal Circuit case law, arguing that a comprising claim simply allows additional steps to the ones listed in the claim; it does not reach into each of the limitations to expand the scope of each claimed limitations. *See Dippin' Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed.Cir.2007) ("[C]omprising' is not a weasel word with which to abrogate claim limitations."). In *Dippin' Dots*, the Federal Circuit addressed a method claim, and limited the construction of the term "comprising" to only extend the number of steps recited by the claim, not allowing it to render every word and phrase in every step open-ended. *See id.* There, the Federal Circuit refused to extend the meaning of the term "beads" to anything more than just its ordinary meaning. The Court does not read *Dippin' Dots* to require restricting the term "a minimum" in this case as suggested by the defendants. The Court is not persuaded that the inventor intended to recite "the least possible current required" rather than "at least sufficient current required."

The Court however agrees with the defendants that plaintiffs cannot delete the reference point of the central office from the construction. Therefore, "draw a minimum current required by a central office to seize the telephone line" shall mean "draw at least sufficient current required by a central office to seize the telephone line."

7. means for connecting said transmit signal output to said tip output and to a gate input of said gated line switch (Claim 1, 2)

[26] Both parties agree that this term corresponds to a means-plus-function claim limitation and agree on the meaning of the recited function: "Connecting transmit signal output to tip output and to gate input of gated line switch." The dispute is over the corresponding structure. Plaintiffs' proposed construction of the structure corresponding structure to this term is: "Wires and circuitry connecting the output of a transmit opto-coupler to the input of a line seize switch (e.g., through resistive elements) and to a tip output, or equivalents thereof." Defendants argue that "wires and circuitry" really means any conceivable connection since it would not be possible to connect two parts of a circuit with something that would not be encompassed by "wires and circuitry." Their proposed construction of the corresponding structure is two part: "(i) a direct connection from a terminal of transmit opto-coupler 20 to the gate input of the gated line switch 15 with no intervening components; and (ii) one resistor and diode bridge 12 connecting transmit opto-coupler 20 to tip output 11." The Court agrees with the defendants on narrowing the scope of plaintiffs' proposed construction. The recited means for this limitation is construed as, "Wires connecting the output of a transmit opto-coupler 20 to the gate input of a gated line switch 15 and through any resistive elements and diode bridge 12 to a tip output 11, or equivalents thereof."

8. means for controllably providing a low level DC bias signal to said transmit signal input and generating sufficient current on said transmit signal output to substantially saturate said gated line switch and seize said telephone line (Claims 1, 2)

[27] Both parties agree that this term corresponds to a means-plus-function claim limitation and agree on the meaning of the recited function: "Controllably providing a low level bias signal to said transmit signal input and generating sufficient current on said transmit signal output to substantially saturate said gated line

switch and seize said telephone line." The dispute is over the corresponding structure. Plaintiffs' proposed construction of the structure corresponding structure to this term is: "A DC bias source coupled to the transmit opto coupler input, a transmit opto coupler output coupled to a gated line switch input, or equivalents thereof." Defendants propose: "A line seize signal 23 directly connected to an input of an OR gate. The output of the OR gate is directly connected to a DC bias source 22, which is connected to an input of a comparator. The output of the comparator is directly connected to the input of transmit optocoupler 20. The output of transmit opto-coupler 30 is directly connected to a gate input of a gated line switch 15." Defendants argue that the structure such as the line seize signal and the OR gate that help generate the signal also need to be included because the recited function is "controllably providing a low level DC bias signal." The Court disagrees. The plaintiffs point out that the function does not require the generation of the signal. Figure 1 in the specification makes clear that the line seize signal is externally provided to the circuit shown. The Court therefore adopts the structure proposed by the plaintiffs and construes the recited means for this term as "A DC bias source 22 coupled to the transmit opto coupler 20 input and a transmit opto coupler 20 output connected to the gate input of a gated line switch 15, or equivalents thereof." Further, the Court finds that a "low level DC bias signal." means "a signal providing a low level direct current bias or offset."

9. means for providing an outgoing AC signal to said transmit signal input (Claim 1, 2)

[28] Both parties agree that this term corresponds to a means-plus-function claim limitation and agree on the meaning of the recited function: "Providing an outgoing AC signal to said transmit signal input." The dispute is over the corresponding structure. Plaintiffs' proposed construction of the structure corresponding structure to this term is: "A wire or coupling circuitry." Defendants argue that "wires and circuitry" really means any conceivable connection since it would not be possible to connect two parts of a circuit with something that would not be encompassed by "wires and circuitry." Their proposed construction of the corresponding structure is "A transmit input signal directly connected to a transmit amplifier 24, which is directly connected to a capacitor, which is directly connected to an input of a comparator. The output of the comparator is connected to an input of the transmit opto-coupler 20. Another input of the comparator is connected to a DC bias source 22." The Court agrees with the defendants that plaintiffs' proposed construction is too broad. The recited means for this limitation is construed as, "Wires connecting the source of AC signal to the transmit opto-coupler 20 input through any capacitor and comparator circuit elements."

V. Terms in Dispute-Defendants' '250 Patent

A. Agreed Constructions

The parties have not agreed on the construction of any of the terms previously in dispute.

B. Disputed Constructions

1. signal processing means connected to said sensors which processes the signals and evaluates the signals and produces an alarm signal when necessary based on the evaluation of the signals (Claim 1)

[29] Both parties agree that this is a means-plus-function claim limitation and agree that the recited function should be given the meaning, "Processing and evaluating the signals and producing an alarm signal when necessary based on the evaluation of the signals."

With regard to the recited means, the plaintiffs propose the following construction:

Processor 12 and associated software. These operations are:

1) A simple approach for evaluating the signals from the two sensors is to merely add the two results and then compare this result with a predetermined threshold....This arrangement provides a simple approach for discriminating between different sizes of radiation sources.... It can be appreciated that the detector can also easily be adjusted for a particular application, if desired, by providing a variable threshold. In this case, depending upon the particular animals, thresholds can be set such that the animal does not cause an alarm while still being sensitive to a human intruder.

2) each signal is evaluated at different amplitude levels and processed as described in U.S. Pat. No. 5,444,432.

Defendant's proposed construction of this term:

Processor 12, the corresponding algorithm is:

- (i) adding the signals from the two sensors and comparing the result with a predetermined threshold, which may be variable; or
- (ii) evaluating the signals separately at different amplitude levels and determining when both signals exceed a standard, which may be variable.

The argument between the parties focuses on the second method of signal evaluation in the recited means. Plaintiffs argue that the Court should construe it as including the detailed method cited in the external reference, U.S. Patent No. 5,444,432 ("the '432 patent"). Plaintiffs cite the Harris Corp. opinion from the Federal Circuit to argue that where "the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm." *Harris Corp. v. Ericsson, Inc.*, 417 F.3d 1241, 1253 (Fed.Cir.2005). Plaintiffs read this ruling to require the Court to construe the second method in this case to be the algorithm defined in the other patent.

Defendants argue that providing a complete patent to the jury as a construction of a single term would simply confuse the jury on the term. The court agrees. The patent is ten pages long, includes four drawing sheets containing highly technical drawings, and eighteen claims. '432 Patent. Referencing the entire patent in the construction of the term would allow both parties to present expert testimony to the jury on the meaning of the algorithm contained in the '432 patent. The Court believes that the risk of confusing the jury in this case would be significantly high, given the complexity of that patent. *See CytoLogix Corp. v. Ventana Med. Sys., Inc.*, 424 F.3d 1168, 1172 (Fed.Cir.2005) (holding that "the district court should have refused to allow such [expert] testimony despite the agreement of the parties [because the] risk of confusing the jury is high when experts opine on claim construction before the jury").

Defendants cite the same Harris Corp. opinion to point out that the Federal Circuit in that case construed the disputed term as a simple description of the algorithm detailed out in that patent. *Harris Corp.*, 417 F.3d. at 1254 (construing the structure for "time domain processing means" as being "a microprocessor programmed to carry out a two-step algorithm in which the processor calculates generally nondiscrete estimates and then selects the discrete value closest to each estimate."). Therefore, defendants argue, the summary of the algorithm provided in the specification of the '250 patent suffices as recited means corresponding to the

second method. The Court agrees. The Harris Corp opinion rejects a broad construction, such as the one in that case, where the district court had simply construed the means as a "symbol processor." *Id.* at 1253-55 (citing *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1348-49 (Fed.Cir.1999)) ("WMS Gaming restricts computer-implemented means-plus-function terms to the algorithm disclosed in the specification."). However, the Federal Circuit did not suggest that the entire detailed algorithm be included as part of the recited means of the means plus function term at issue. *See id.* at 1254 (analyzing the disclosed algorithm to arrive at a construction that would inform the jury on whether the claims of the patent in issue "cover systems that implement either a one-step or two-step process"). Here too, an analysis of the algorithm detailed in the '432 patent informs the Court that the construction proposed by the defendant is an accurate summary of the disclosed algorithm. The Abstract of the '432 patent reads: "An arrangement and method for processing signals from infrared intrusion detectors is disclosed which allows the signal to be processed at different amplitude levels to recognize different signal characteristics." '432 Patent, Abstract. The Summary of the Invention provides

The method comprises processing the output signal to produce at least first and second sets of pulses. Each pulse of the first set of pulses is produced when a signal is of amplitude exceeding a first predetermined level and being of a duration corresponding to the duration the signal is maintained above the first predetermined level. Each pulse of the second set of pulses is produced during a pulse of said first set of pulses when the signal exceeds a second predetermined level which is higher than the first predetermined level. The duration of the pulses of the second set of pulses correspond to the duration the signal is maintained above the second predetermined level. This system requires analyzing the set of pulses to evaluate whether an alarm condition exists. With this arrangement the output signal has been broken up into segments for a stepped evaluation to allow evaluation of the signal at different levels and in a preferred form allows evaluation of the rate of change of the signal between respective levels.

'432 Patent, Summary of the Invention.

The detailed description of the preferred embodiments, with the help of the drawings, discloses the method claimed using discrete components such as an n-level multi-comparator, a pulse symmetry detector discriminator, a voltage to current converter, and an energy accumulation storage device. As described, each signal is evaluated separately at the n-level multi comparator stage, based on a series of predetermined minimum threshold values. An alarm is triggered only when two consecutive signals are high enough to trip the energy accumulation storage device. The specification also makes clear that components and functions described can be carried out by a microprocessor. '432 Patent, 5:59-61. The Court finds that the defendant's proposed construction of the second method provides sufficient detail to satisfy the requirements of the holding in *Harris Corp.*

The parties also argue about whether the predetermined threshold that the incoming signal is evaluated against is variable. While plaintiffs do not dispute that the threshold is variable and can be set or changed, they argue that because the incoming value is compared against one single value, that threshold cannot be termed as "variable." The Court finds that defendant's proposed construction captures this distinction.

The corresponding structure for is therefore:

A processor 12 and associated software that is capable of performing these operations:

(i) adding the signals from the two sensors and comparing the result with a predetermined threshold, which

may be variable; or

(ii) evaluating the signals separately at different amplitude levels and determining when both signals exceed a standard, which may be variable.

2. two PIR receiver arrangements (Claim 1)

[30] The parties agree that "PIR" means "passive infrared." The parties dispute whether an additional limitation should be added to the claims to limit the two PIR receiver arrangements as having a single lens arrangement that works with both the PIR receivers.

Plaintiffs propose that the two PIR receiver arrangements be construed as including one or more lenses, implying that a common lens or set of lenses correspond to both the PIR receiver arrangements. Their proposed construction of the term is "two passive infrared receiver subsystems including one or more lenses and at least two infrared sensors."

Defendants, on the other hand, differentiate the lens for each receiver arrangement in their construction: "two passive infrared receiver arrangements, each including a lens arrangement and an IR sensor."

Plaintiffs argue that because the claim recites "each PIR receiver arrangement including a lens arrangement," it would have to be a single lens arrangement that corresponds to the two PIR receivers. The focus of plaintiffs' argument is Figure 5 of the specification, where the inventor refers to "a flexible lens arrangement," having an "upper section 42 and lower section 44." Plaintiffs argue this describes an embodiment with a single lens arrangement. They further argue that the only way the inventor could intend to differentiate the detection of active and inactive zones would be by having the lens arrangement formed on a single sheet of plastic to avoid any alignment problems.

Defendants respond by arguing that even if the description encompasses a device having two lens arrangements formed on a single sheet of material, that alone does not eliminate the requirement of plural lens arrangements in the system. They argue that one single lens cannot define two sets of alternating active zones, as recited in claim 1 and described in the specification. Defendants ask the Court to read in the plain and ordinary meaning of the claim language, "a housing having two PIR receiver arrangements, each PIR receiver arrangement including a lens arrangement...." Defendants also point to Figure 2 describing a "Top Lens" and a "Bottom Lens."

Defendants further argue that the examiner rejected the inventors original claims 7-9 that encompassed a single lens arrangement based on prior art, and allowed the remaining claims that recited two lens arrangements defining two sets of alternating active zones over the same prior art. '250 File History, Ser. No. 08/789,386, Office Action, at 2 (May 22, 1998). Plaintiffs contend that it was the plural receiver arrangement rather than the separate lenses that the examiner differentiated over prior art in allowing the remaining claims. Although the Court agrees with the plaintiffs that the prosecution history does not provide any support for defendants' arguments, it finds that there is sufficient support in the specification to require a plurality of lens arrangements within the meaning this term. Further, the defendants' interpretation is reasonable when claim 1 is read as a whole. *See Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed.Cir.1999) ("Proper claim construction, however, demands interpretation of the entire claim in context, not a single element in isolation."). The Court therefore adopts defendants' proposed construction for this term: "Two passive infrared receiver subsystems, each including a lens arrangement and an IR

sensor."

3. lens arrangement (Claim 1)

[31] Defendants argue that this term does not require the Court's construction. Alternatively, they argue the Court should construe this term to mean "a lens formed from a collection of elements arranged in a specific order or relation." Plaintiffs' proposed construction for this term is "a lens, where the same lens may be used as a lens arrangement for each of the two PIR receiver arrangements." The dispute over the construction of this term is the same as that over the term, "two PIR receiver arrangements." Defendants argue that there are two separate lens or lens arrangements, one corresponding to each PIR receiver, while the plaintiffs point to the preferred embodiment in Figure 5 to contend that there is one single arrangement formed from a collection of Fresnel lenses. The Court construes this term consistent with the construction of the preceding term. "Lens arrangement" means "a lens formed from a collection of elements."

4. adjacent active zones are separated by a nonresponsive zone (Claim 1)

[32] Defendants argue that this term does not require the Court's construction. Alternatively, they argue the Court should consider that "not all of the adjacent active zones must be separated by a nonresponsive zone." Plaintiffs propose a construction such that "all adjacent active zones at ground level must be separated by a non-responsive zone to reduce the response from small animals at ground level."

The reason cited by claim 1 for this separation is that it "reduces the response from a ground level region to infrared radiation from radiation sources of the size of a small domestic pet." Thus, plaintiffs argue that all active zones at the ground level need to be separated. They argue that because there is nothing in the claim language that indicates that only some active zones may be separated, the Court should require that all active zones be separated. There is no support for plaintiffs' argument in the specification. Dependent claim 4 explicitly recites a detector in which active zones overlap at a height of about four feet. As defendants argue, this dependent claim would directly contradict plaintiffs' proposed construction. Further, Figure 2, which both parties rely on to support their arguments, indicates that it is possible for active zones to overlap at the ground level. The Court finds no reason to read a new limitation into the claims. *See Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed.Cir.2008) (citing *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed.Cir.1999)) ("Courts cannot rewrite claim language."). Therefore the term is construed as "not all of the adjacent active zones must be separated by a nonresponsive zone."

5. said zones (Claims 2, 3, 4 and 5)

[33] Defendants argue that this term does not require the Court's construction. Alternatively, they argue the Court should construe the term as "the two sets of alternating active zones." Plaintiffs argue that a construction of this phrase is not possible to discern from the claim language or claims to which it depends. They argue that one of ordinary skill cannot discern which of the "zones" in independent claim 1 were being referred to as antecedent basis by the inventor when he used the term "said zones" in dependent claims 2, 3, 4 and 5. They suggest a variety of different interpretations for "said zones." Therefore, plaintiffs contend, the term is not amenable to construction and is insolubly ambiguous.

Defendants contend that there is enough support in the specification to find that the "said zones" refer to the two sets of alternating active zones. They contend that Figure 2 and related text that describe two sets of active zones that alternate in a vertical direction provide support within the specification for construing "said zones" in dependent claim 2. Further, they argue that all dependent claims recite "said zones" that alternate

in a particular direction and the only alternating zones recited in independent claim 1 are the "alternating active zones." Along the same lines, they argue that if the antecedent basis for "said zones" was "the nonresponsive zones" recited in independent claim 1, as argued by the plaintiffs, Claim 4 would be rendered illogical, reciting nonresponsive zones separated by nonresponsive zones.

[34] The Court finds that the term is not insolubly ambiguous. *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed.Cir.2007). The Federal Circuit has held that even if there is no explicit antecedent basis for a claim term, the claim can be found to be sufficiently definite where the antecedent basis could be determined by implication. *Energizer Holdings, Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 1370 (Fed.Cir.2006); *Bose Corp. v. JBL, Inc.*, 274 F.3d 1354, 1359 (Fed.Cir.2001) ("If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite." quoting *MANUAL OF PATENT EXAMINING PROCEDURE*, s. 2173.05(e) (6th ed. Rev. 1, Sept. 1995)). There is sufficient support in Figure 2 of the specification and the claim language of the '250 patent to find antecedent basis for "said zones" by implication. *See Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1319 (Fed.Cir.2005) (finding that district court did not err in finding antecedent basis for a term by implication); *Slimfold Mfg. Co. v. Kinkead Indus., Inc.*, 810 F.2d 1113, 1116 (Fed.Cir.1987) (noting that an antecedent basis can be present by implication). Therefore, "said zones" shall refer to "the two sets of alternating active zones."

6. two adjacent zones (Claim 8)

[35] Defendants argue that this term does not require the Court's construction. Alternatively, they argue the Court should construe the term as "two active zones that are next to each other." Plaintiffs argue that a construction of this phrase is not possible to discern from the claim language or claims to which it depends. Plaintiffs argue that one of ordinary skill in the art could not have known which "two adjacent zones" were being referred to as antecedent basis for support of the term. Plaintiffs argue there could be six possible interpretations of the term "two adjacent zones." Therefore, plaintiffs argue, the term is not amenable to construction and is insolubly ambiguous.

Defendants point to sections of the specification that disclose that the two adjacent zones are the active ones that are able to trigger an alarm. Claim 8 recites a detector wherein active and nonactive zones are sized such that a cat has insufficient overlap between two adjacent zones and as such the PIR receiver receives insufficient IR radiation level from a cat to trigger an alarm. The specification explains that a small pet such as a domestic cat is not of sufficient size to cause overlap between two adjacent active zones so as to trigger the alarm. '250 Patent, 2:27-39. Defendants contend that plaintiffs' six different alternate constructions are virtually incomprehensible in context of the claim.

The Court concludes that the term is not insolubly ambiguous. *Young*, 492 F.3d at 1346. As with the term "said zones," the Court finds that there is sufficient support in the specification of the '250 patent to find antecedent basis for "two adjacent zones" by implication. Therefore, "two adjacent zones" means "two active zones that are next to each other."

VI. Conclusion

The court adopts the constructions set forth in this opinion for the disputed terms of the patents. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the court, in the presence of the jury. Any reference to

claim construction proceedings is limited to informing the jury of the definitions adopted by the court.

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