

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

911EP,
Plaintiff.

v.

WHELEN ENGINEERING CO., INC., et al,
Defendants.

Civil Action No. 2-05-CV-137 (TJW)

March 23, 2007.

Background: Patentee sued competitors, alleging infringement of its patents relating to warning signal lights used on emergency and utility vehicles.

Holdings: The District Court, T. John Ward, J., held that:

- (1) term "light signal" meant light sources activated to notify or warn;
- (2) term "different light signals" meant two or more light signals that were not identical;
- (3) term "warning light signals" meant light signals that conveyed warning;
- (4) phrase "different types of visually distinct warning light signals" meant different kinds or categories of visually distinguishable warning light signals;
- (5) term "warning signal light" meant a light that generated warning signals;
- (6) term "light bar" meant an elongated device attached to a motorized vehicle for producing warning light signals;
- (7) term "controller" meant a device or circuit capable of selectively activating light emitting diodes (LEDs); and
- (8) defendant could not rebut presumption that "controller" was not restricted as a means-plus-function clause.

Claims construed.

6,380,865, 6,424,269, 6,469,631, 6,472,996, 6,504,487, 6,788,217, 6,822,578, 6,930,615, 6,989,743.
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

Plaintiff 911EP, Inc. ("911EP") accuses Defendants Whelen Engineering Co., Inc. ("Whelen"), Federal Signal Corporation ("FSC"), Tomar Electronics, Inc. ("Tomar"), and Code 3, Inc. ("Code 3") of infringing nine patents, United States Patent Numbers 6,424,269 ("the '269 patent"); 6,788,217 ("the '217 patent"); 6,504,487 ("the '487 patent"); 6,822,578 ("the '578 patent"); 6,930,615 ("the '615 patent"); 6,469,631 ("the '631 patent"); 6,472,996 ("the '996 patent"); 6,380,865 ("the '865 patent"); and 6,989,743 ("the '743 patent").

II. Background

All nine patents-in-suit relate to the same general subject matter-warning signal lights used on emergency vehicles, such as police cars, ambulances, and fire trucks, and utility vehicles, such as highway maintenance vehicles. The prior art involved warning signal lights using halogen or incandescent lights, which had limited life and used a large amount of electricity. The patents disclose warning signal lights using light emitting diodes ("LEDs") activated by a programmable controller. The LEDs can be programmed with a variety of flash patterns by varying the duration, intensity, and frequency of the LED illumination.

The patents-in-suit can be divided into two families. The first family includes the '269, '631, '996, '487, '217, '578, and '615 patents, which are all continuations of U.S. Patent Application No. 09/169,871 ("the '871 application") and have the same specification. The Court will use the '269 patent as a common reference for the specification of the first family of the patents-in-suit. The second family includes the '743 and the '865 patents. The '743 patent is a continuation of U.S. Patent Application No. 09/539,189 ("the '189 application"). The '189 application eventually matured into the '865 patent. The '743 and '865 patents, therefore, share the same specification. The Court will use the '865 patent as a common reference for the specification of the second family of the patents-in-suit. The Court's construction, as set forth below, applies to all patents-in-suit.

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).

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).

[3] [4] [5] 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).

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.*

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, 8 Otto 31, 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. Marposs 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.

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. The Court now turns to a discussion of the patents-in-suit and the disputed claim terms.

IV. Terms in Dispute

There are twelve terms or phrases at issue for claim construction. These twelve terms or phrases can be found in five representative claims from two of the patents-in-suit-claims 1, 3, and 7 of the '578 patent, and claims 1 and 13 of the '865 patent.

A. The '578 patent

Claim 1

A multiple warning signal light for use with a motorized vehicle, the multiple warning signal light comprising of:

- a) a light bar having a first visible exterior services;
- b) a plurality of light emitting diodes arranged about and attached to the first visible exterior surface; and,

c) at least one controller in electric communication with the light emitting diodes, the at least one controller constructed and arranged to activate the light emitting diodes thereby producing at least two different types of visually distinct warning light signals, wherein the at least two different types of visually distinct warning light signals are produced simultaneously, said light emitting diodes receiving power from a power source.

Claim 3

The multiple warning signal light of claim 2, wherein the at least one controller independently controls the light emitting diodes on the first visible exterior surface and the second visible exterior surface for the provision of different warning light signals on the first visible exterior surface and the second visible exterior surface.

Claim 7

The multiple warning signal light of claim 1, wherein the motorized vehicle is an emergency vehicle.

B. The '865 patent

Claim 1

A warning signal light comprising:

- a) a light support having a front side;
- b) a plurality of light emitting diode (LED) light sources disposed on the front side;
- c) a controller in electric communication with the light sources, the controller for selectively illuminating the light sources to create a plurality of light signals, at least two different light signals being produced simultaneously, the controller adapted to provide selectively modulated illumination to the illuminated light sources to provide at least one of the plurality of light signals.

Claim 13

A warning signal light for use with a vehicle, the warning signal light comprising:

- a) a light support mounted to the vehicle, the light support having a plurality of sides;
- b) a plurality of light emitting diodes (LED's) disposed about at least one of the sides of each light support; and
- c) a controller in electric communication with the LED's, the controller for selectively illuminating the LED's to create a light signal, the controller adapted to provide selectively modulated illumination to the illuminated LED's.

V. Discussion

The majority of the discussion will involve the dispute over claim terms and phrases as discussed by the

plaintiff and Whelen, FSC, and Code 3. FN1 The issues raised by Tomar will be addressed separately in the last section.

FN1. 911EP has now settled with and dismissed FSC and Code 3. FSC and Code 3 originally joined Whelen in the claim construction briefing submitted to the Court.

A. "light signal"

[6] This term appears in all of the independent claims. The plaintiff proposes "signal produced by selectively activating one or more light sources according to a timing pattern." Defendants propose "a light emission that conveys information." The main disputes revolve around two areas-1) whether a timing pattern is required, and 2) whether "light signal" conveys information.

The plaintiff contends that the specification and claims repeatedly describe light signals in terms of timing patterns, such as flashing, oscillating, revolving, etc., and sequences or intervals. *See* '269 patent, 3:36-39, 2:10-12, 4:61-62; '578 patent, claims 24-32, 36-44. The plaintiff also contends that the specification and claims explain that light signals are produced by selectively activating light sources. *See* '269 patent, 4:23-24, 5:2-65 (light signals created by "selectively activating" light sources or LEDs). The plaintiff argues that Defendants' proposed construction is too narrow because it would not cover a warning signal that does not convey information. The plaintiff also argues that Defendants' proposed construction is too broad because it would cover message boards that convey information but do not produce warning light signals (e.g., "Congestion ahead"). According to the plaintiff, the specifications make it clear that "message" or "images" are not "signals." *See* '269 patent, 4:36-41 (listing types of signals, but not referring to "message" or "images" as signals). In addition, the plaintiff contends that, according to the inventor's deposition, the invention only covers warning signals that flash, oscillate, revolve, etc., and not panels carrying messages or images. Finally, the plaintiff argues that "messages" were clearly disclaimed in the prosecution history when the patentee stated that there would be no motivation to combine the prior art of vehicle warning lights and modular message boards. '189 application, Sept. 5, 2001 Amendment, at 11-12.

Defendants contend that the phrase is used broadly in the patents and, therefore, should be given a broad construction according to its ordinary meaning. Defendants argue that the specification does not refer to a timing pattern, but explicitly states that "light signals" provide information. '269 patent, 6:4-18. In addition, Defendants point out that the specification refers to some light signals as a "constant light signal" or a "stationary light signal," which do not require a timing pattern at all. Defendants argue that the plaintiff erroneously assumed that warning light signals do not convey "information," and that the patents include message boards within their scope. Furthermore, Defendants argue that the patentee, in distinguishing prior art, stated that "light signals ... could be that of a stationary light, a strobe light, a revolving light, or warning signals which could appear as symbols, characters, or arrows." '871 application, Dec. 16, 1999 Amendment, at 15. Finally, Defendants argue that the dictionary definition of "signal" (e.g., "an object placed to convey notice or warning") also supports their proposed construction. *See* Webster's International Dictionary (2d ed.1956).

The Court agrees with Defendants that "light signal" should not be limited to "timing patterns" because some signals do not require timing patterns (e.g., constant light signal). The Court also agrees with the plaintiff that "light signal" should not be expanded to "conveying information." In the prosecution history, the patentee disclaimed modular message boards. *See* '189 application, Sept. 5, 2001 Amendment, at 11-12.

Defendants' proposed construction that a light signal "conveys information" would encompass the disclaimed message boards. Accordingly, "light signal" means "light sources activated to notify or warn."

B. "different light signals"

[7] The plaintiff proposes "light signals produced according to different timing patterns." Defendants propose "two or more light emissions that convey information and are not identical." The main issue is whether "different" means different timing patterns or "not identical."

The plaintiff argues that light signals with different timing patterns are clearly different from each other, and that the specifications refer to different light signals in terms of timing patterns, e.g., flashing, strobing, alternating, etc. *See* '865 patent, 19:21-25, '269 patent, 4:37-41.

Defendants argue that the patents-in-suit distinguish signals based on color, intensity, and position. Defendants also contend that the plaintiff's construction would not classify a wide range of light signals (e.g., amber warning lights on utility vehicles, red and/or blue warning lights on police vehicles, etc.) as "different light signals."

In reply, the plaintiff points to claim 15 of the '865 patent describing the ability to selectively illuminate LEDs on different sides as a way to create different light signals, and claim 3 (and other claims) of the '269 patent disclosing the independent control of LEDs on two exterior surfaces. The plaintiff argues that if "position" made light signals different, then there would be no need to independently control LEDs on each side or surface in order to create different light signals. Second, the plaintiff argues that "color" does not create "different light signals" because "color" is an attribute of "light signal," but does not define "light signal." The plaintiff further argues that, in the prosecution history, the examiner did not cite the combination of prior art with different color LEDs as reciting "at least two different light signals."

The plaintiff's proposed construction is too narrow. Nothing in the specification limits "different light signals" only to "light signals" with different timing patterns. Accordingly, "different light signals" means "two or more light signals that are not identical." The Court incorporates by reference its definition of "light signal."

C. "warning light signals"

[8] The plaintiff proposes "light signals that convey warning." Defendants propose "a light emission that conveys warning information." The main dispute involves Defendants' inclusion of "information." Both parties agree that "warning" is an adjective that modifies "light signal." The parties, however, make the same arguments as discussed above for the construction of "light signal" and disagree as to whether "light signal" includes messages and images.

For the same reasons as discussed in Section A, the Court concludes that "warning light signals" does not encompass all "information." Accordingly, the Court adopts the plaintiff's construction and "warning light signals" means "light signals that convey warning." The Court incorporates by reference its definition of "light signal."

D. "different warning light signals"

[9] The plaintiff proposes "warning light signals produced according to different timing patterns."

Defendants propose "two or more light emissions that convey warning information and are not identical." The parties make the same arguments as above for the construction of "different light signals" and "light signals."

For essentially the same reasons as discussed in Section B, the Court concludes that "different warning light signals" means "two or more warning light signals that are not identical." The Court incorporates by reference its definition of "warning light signals."

E. "different types of visually distinct warning light signals"

[10] The plaintiff proposes "different kinds or categories of visually distinguishable warning light signals." Defendants propose "different categories of visually distinguishable warning light signals, each having attributes establishing it as an exclusive group (e.g., steady-on, flashing, oscillating, rotating, character, or symbols)." The main dispute centers around Defendants' further limitation of "exclusive."

The plaintiff argues that the ordinary meaning of "type" should be used because nothing in the specification or prosecution history indicates a deviation from the dictionary definition or the need to include the word "exclusive." The plaintiff further argues that the defendants' parenthetical list is unnecessary because a lay person would understand that a "kind" or "category" of signals would have some common attributes.

Defendants argue that the phrase is indefinite because the claims, specification, and prosecution history do not provide a standard or objective means for one of ordinary skill in the art to determine whether or not a product infringed. In addition, Defendants argue that claim scope was limited during prosecution. Defendants contend that the patentee abandoned previous claim language from "a plurality of visually distinctive warning light signals" and narrowed the claims to "more than two different types of visually distinct warning light signals" produced either "simultaneously" or "in at least one combination." *See* Dec. 13, 2001 Amendment, at 1-4; June 13, 2002 Amendment, at 1-5; Feb. 19, 2004 Amendment, at 2-4; Feb. 20, 2004 Amendment, at 2-7; Dec. 6, 2004 Amendment, at 2-4. In addition, throughout the prosecution, the patentee referred to "constant on," "flashing," and "sequencing" as "single and exclusive types of light signals." *See* Feb. 19, 2004 Amendment, at 9; Feb. 20, 2004 Amendment, at 6; Dec. 6, 2004 Amendment, at 6. Defendants, therefore, contend that a "simple flash" is a different type of light signal from a "triple flash" because they are both "flashing" light signals.

In reply, the plaintiff argues that whether a "single flash" is a different type of signal from a "triple flash" is a question for the jury to decide.

The Court disagrees with Defendants' attempt to limit the phrase to "exclusive" groups. There is nothing in the claims or specification to suggest such a limitation. The Court also disagrees with Defendants' indefiniteness argument because one of ordinary skill in the art would understand that different types of a "visually distinct warning light signal" refers to different categories or kinds of warning light signals. Accordingly, the Court adopts the plaintiff's proposed construction, and "different types of visually distinct warning light signals" means "different kinds or categories of visually distinguishable warning light signals."

F. "warning signal light"

[11] The plaintiff proposes "device that generates a warning light signal for identifying a motorized vehicle as an emergency vehicle or as a utility vehicle." Defendants propose "a light that generates a light emission that conveys warning information." The two main issues are 1) whether the phrase is limited to "identifying"

the vehicle, and 2) whether the light signal conveys "information."

The plaintiff argues that the specifications and claims do not describe the invention as anything other than a warning signal light for use on emergency vehicles or utility vehicles. In addition, the plaintiff cites to the inventor's deposition stating that purely informational devices on ordinary vehicles would not be a "warning light" because no one would recognize it as an emergency vehicle. The plaintiff further argues that Defendants' construction is too narrow because it covers only one embodiment which can display images, symbols, and characters, in addition to warning light signals, but does not cover the other embodiment where *only* warning light signals (e.g., flashing, oscillating, etc.) are used with no capability to display messages. The plaintiff also argues that Defendants' construction is too broad because it would cover informational message boards that produce no warning light signals.

Defendants argue that the specifications are broad and discuss warning signal lights other than that attached to a motor vehicle. *See* '269 patent, 3:19-24, 8:43-45; '865 patent, 7:65-8:2. Furthermore, Defendants argue that under the doctrine of claim differentiation, the claims must have a broad meaning. Claims 1-9 of the '865 patent do not mention a motorized vehicle, while other dependent claims require "an emergency vehicle" or "a utility vehicle." *See* '865 patent, claim 26, claim 27. Defendants also point out that the phrase "warning signal light" only appears in the preamble and states an intended use, and, therefore, should not limit the claim. Defendants disagree with the plaintiff's contention that one of the embodiments discusses *only* using warning light signals without the capability to display messages. *See* '269 patent, 4:37-48, '865 patent, 10:21-33, 10:47-55 (discussing display of images such as arrows).

In reply, the plaintiff argues that the prosecution history clearly limited the invention to warning signal lights on motorized vehicles because the patentee distinguished prior art on the basis that the prior art did not disclose light signals "for use with an emergency vehicle." '871 application, Dec. 20, 1999 Amendment, at 18.

The Court agrees with Defendants that the phrase is not limited to "identifying" the vehicle because this limitation is included in dependent claims. *See* Phillips, 415 F.3d at 1315 (stating that dependent claim limitations are presumed not to be present in the independent claim). Accordingly, "warning signal light" means "a light that generates warning signals."

G. "light bar"

[12] The plaintiff proposes "an elongated device attached to a motorized vehicle for producing warning light signals that identify the vehicle as an emergency or utility vehicle." Defendants propose "an elongated base, two or more warning signal lights, a cover protecting the warning lights and associated structure for mounting to a vehicle." The parties agree that the construction should include "elongated" to distinguish from hemispherical warning signal lights.

The plaintiff argues that the specification discusses light bars as emergency lights seen on police cars, fire trucks, and ambulances. '269 patent, 1:11-14; '865 patent, 1:13-16. In addition, the plaintiff argues that Defendants' construction narrows the phrase to a specific embodiment by requiring a cover.

Defendants argue that every depiction of a light bar includes a cover and that a light bar is clearly an assembly of components with a cover to protect the warning signal lights and other internal components. *See* '269 patent, Fig.1 and Fig. 2, 7:12; '865 patent, Fig. 1 and Fig. 2, 13:2. Defendants also argue that there

is no reason to limit "light bar" to a particular function. Finally, Defendants point to the prior art referred to in the Background of the Invention section of the patents-in-suit, specifically the Jinks patent, which discloses light bars with a cover. FN2

FN2. In reply, the plaintiff contends that the claims in the Jinks patent disclose light bars with and without a cover or casing.

The Court agrees with the plaintiff that nothing in the claims or specification requires the limitation of a cover. The Court will not import limitations from a preferred embodiment into the construction of claims. Accordingly, "light bar" means "an elongated device attached to a motorized vehicle for producing warning light signals." The Court incorporates by reference its definition of "warning light signals."

H. "controller"

[13] The plaintiff proposes "an electronic device that can be programmed to selectively provide electric power to the devices to which it is connected." Defendants propose "a device or circuit which controls the operation of another device or circuit." The principal dispute is whether the "controller" needs to be "programmable."

The plaintiff argues that the "controller" must be a device that can be used to generate a wide variety of light signals. The plaintiff, therefore, argues that Defendants' proposed construction is too broad because it would include a simple on/off switch which would not be able to generate a wide variety of signals. The plaintiff also argues that the "controller" needs to be programmable because the dependent claims recite "a programmable external controller for programming said controller." '269 patent, claim 14. According to the plaintiff, if the controller was not programmable, then dependent claim 14 would not make sense. The plaintiff also argues that its construction is supported by the IEEE definition of controller-"a device or group of devices that serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected." *IEEE Standard Dictionary of Electric and Electronics Terms* (6th ed.1996).

Defendants contend that the IEEE definition actually supports its construction because the definition does not require programmability. Defendants also argue that the programmability of the controller is only one embodiment and should not be read into the claims. In terms of claim structure, Defendants point to the fact that, in some cases, dependent claims regarding "a programmable external controller" are also dependent on claims requiring the controller to be a "microprocessor." Defendants argue that microprocessors are inherently programmable, and, therefore, there is no need to place a programmability limitation on "controller." FN3

FN3. In reply, the plaintiff notes that there other types of circuits, other than microprocessors, that are programmable, e.g., field-programmable gate arrays (FPGAs).

The Court concludes that one of ordinary skill in the art would understand a "controller" to be a circuit or device that is either programmable or has a pre-determined function. In the context of the patents-in-suit, the controller is used to selectively activate LEDs. '269 patent, 4:37-38. A programmable controller is an aspect of a preferred embodiment that should not be read into the claims. Accordingly, "controller" means "a

device or circuit capable of selectively activating LEDs."

I. "controller adapted to provide selectively modulated illumination to the illuminated LEDs/light sources"

[14] This phrase appears in the claims of only the '865 patent. The plaintiff proposes "the controller adapted to provide illumination whose intensity is selectively varied to illuminate LEDs/light sources." Defendants propose "the controller produces incremental variation in brightness of LEDs/light sources during illumination." The main dispute is over "selectively modulated illumination" and whether it means that "intensity" is "selectively varied" or whether it means that there is "incremental variation in brightness."

The plaintiff argues that its construction allows for a full range of modulation while Defendants' construction only allows for "incremental variation." The plaintiff bases its argument on the fact that "modulation" encompasses a variety of waveforms, such as "sinusoidal" and "triangular," which could not be characterized as "incremental variation." In addition, the plaintiff points out that claim 1 of the '743 patent recites "the controller is capable of providing variable illumination intensity" Because different claim terms are presumed to mean different things, "modulated illumination" cannot mean the same thing as "variable illumination intensity." Finally, the plaintiff points to the prosecution history where the patentee distinguished prior art through the invention's modulated illumination of light sources to create strobe, flashing and/or alternating light signals. '189 application, Sept. 5, 2001 Amendment, at 5-6. According to the plaintiff, these signals are all on/off patterns, which would not be covered by "incremental variation," but would be covered by "selectively varied."

Defendants argue that the specification and prosecution history make it clear that "modulated intensity" does not include "flashing light." According to the defendants, the specification separately lists "modulated or variable intensity light" and "a flashing light." '865 patent, 5:2-5, 30-32, 38-40, etc. Defendants contend that the prosecution history disclaims "flashing light signals" because the patentee, in responding to a rejection, described the controller to be "adapted to provide selectively modulated illumination to the illuminated LEDs." '189 application, Sept. 5, 2001 Amendment, at 12.

The Court agrees with the plaintiff. One of ordinary skill in the art would understand "modulated" to include drastic variations. Therefore, something "modulated" only needs to be "varied," and is not limited to an "incremental variation." Accordingly, "controller adapted to provide selectively modulated illumination to the illuminated LEDs/light sources" means "controller adapted to provide illumination whose intensity is selectively varied to illuminate LEDs/light sources."

J. "visible exterior surface"

The plaintiff proposes "a surface, at least a portion of which is visible from the exterior of the light bar." Defendants propose "outside surface in plain view."

The plaintiff argues that the prosecution history shows that the examiner characterized prior art as a light enclosed within a transparent cover and visible from the exterior. The plaintiff further argues that, based on this characterization, the patentee amended claims to distinguish the invention from the prior art. *See, e.g.*, '269 patent, Prosecution History, July 18, 2001 Office Action; '269 patent, Prosecution History, Sept. 26, 2001 Response to Office Action. According to the plaintiff, Defendants' construction of "outside surface" would not encompass the embodiments of a light bar with a transparent cover. The plaintiff argues that the requirement of "outside surface" would render the "visible" limitation superfluous, which is contrary to case

law. *See Merck & Co., Inc.*, 395 F.3d at 1364, 1372. The plaintiff also argues that it added "a portion" to its proposed construction because something does not need to be completely in plain view in order to be "visible" (e.g., a man sitting behind a desk).

Defendants claim that their definition is appropriate based on the ordinary and plain meaning of the phrase. They also argue that the plaintiff's construction does not make a distinction between "light support" and "light bar." Claims of the '996 and '487 patent involve a "light support" with a "visible exterior surface" while the claims of the '269, '631, '217, and '578 patents involve a "light bar" with a "visible exterior surface." Defendants further argue that in order to distinguish prior art, the patentee stated that the prior involved LEDs within a cylindrical glass as opposed to the invention where the LEDs are mounted on the exterior surface. '189 application, Sept. 5, 2001 Amendment, at 10. Defendants also point to provisional applications which claim that the invention eliminates the need for filters, reflectors, and lenses.

The Court disagrees with the defendants and does not find any support to limit the construction to the "outside surface." The Court concludes that the phrase can be understood as written and no further construction is necessary.

K. "arranged about/disposed about"

[15] The parties have agreed that "arranged about" and "disposed about" are synonymous and should have the same construction. The plaintiff proposes "placed or set in a particular order." Defendants propose "covering substantially all of."

The plaintiff contends that its construction follows the plain and ordinary meaning of the phrases as defined in dictionaries. *See, e.g., American Heritage Dictionary* 129 (2d college ed.1991). The plaintiff also argue that this dictionary meaning is supported by the prosecution history, and that Defendants' construction is limited to the preferred embodiment.

Defendants argue that the plaintiff's construction is not supported by the claims or the specification because they do not require "a particular order." Defendants argue that the specification shows LEDs covering substantially all of the surfaces. *See* '269 patent, fig. 8.

In reply, the plaintiff contends that it does not need to have "a particular order;" "specific order" or "proper order" would be sufficient as defined by other dictionaries. Furthermore, the plaintiff argues that Defendants' construction would not encompass the specification's figures showing 25-50% of surfaces covered by LEDs. *See* '269 patent, figures 5-8, 12.

The Court agrees with the plaintiff that the defendants' construction would exclude preferred embodiments. Accordingly, "arranged about" and "disposed about" mean "placed or set in a specific order."

L. "emergency vehicle"

The plaintiff proposes "an ambulance, fire apparatus, police car or other vehicle which is permitted by law to call for the right of way and violate the rules of the road while responding to an incident." Defendants propose "a vehicle, including but not limited to automobiles, ambulances, trucks, motorcycles, snowmobiles and/or any other type of vehicle, in which warning signal or emergency lights are utilized."

The plaintiff argues that the one common attribute among fire trucks, police cars, and ambulances is that

"they are permitted by law to violate the rules of the road while responding to an incident." This definition comes from the Society of Automotive Engineers (SAE) standard. According to the plaintiff, not all motorized vehicles can be emergency vehicles. For example, an ordinary citizen's vehicle cannot be an "emergency vehicle" just because it carries warning lights.

Defendants contend that the specification defines "emergency vehicles" when it states that "an LED support member ... may be easily connectable to an emergency vehicle, including but not limited to automobiles, ambulances, trucks, motorcycles, snowmobiles, and/or any other type of vehicle in which warning signal or emergency lights are utilized." '269 patent, 3:25-30; '856 patent, 8:3-8. Furthermore, Defendants argue that the patents do not make any reference to any standard or other external source; therefore, the plaintiff may not be allowed to do so.

"Emergency vehicle" has no specific or technical meaning in the context of the claims or specification. Accordingly, the Court concludes that no construction is required.

M. Tomar's Claim Construction Arguments

Tomar did not join in the other defendants' claim construction briefing, but separately filed its own arguments focusing on the interpretation of "controller" as represented in claim 1 of the '615 patent.FN4 In summary, Tomar argues that the Court should interpret "controller" as a means-plus-function claim under 35 U.S.C. s. 112, para. 6 even though the claim itself does not use the term "means." The basis for Tomar's argument is that the "controller" limitation does not "particularly point out and distinctly claim" the invention as required under 35 U.S.C. s. 112, para. 2 because the patent fails to disclose a circuit capable of creating complex light patterns as discussed in the specification. *See* '743 patent, 11:59-62. Tomar contends that this renders the claim indefinite under *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 67 S.Ct. 6, 91 L.Ed. 3 (1946) (superseded by the 1952 Patent Act) because "controller" is the "most crucial element" of a claimed combination described "in terms of what it will do rather than in terms of its own physical characteristics."

FN4. The use of "controller" in claim 1 of the '615 patent is the same as the use of "controller" in claim 1 of the '269 patent and as discussed above in Section H.

Tomar contends that in order to save the claim from invalidity, the Court needs to interpret "controller" as a means-plus-function limitation. To support this contention, Tomar cites to the specification's preferred embodiment stating that a controller "provides a *means* for activating LED's 30 individually" '743 patent, 11:59-61, 23:16-18 (emphasis added), and argues that the use of "means" in the specification is an express disclaimer of claim scope.FN5

FN5. In its response, the plaintiff points out that Tomar has not complied with the Court's docket control order requiring identification by March 16, 2006 of claim elements that should be governed by 35 U.S.C. s. 112, para. 6 nor the deadline of April 5, 2006 for complying with P.R. 4-2 requiring preliminary claim constructions for each element governed by 35 U.S.C. s. 112, para. 6. Nevertheless, the Court has considered Tomar's arguments as part of the claim construction process.

The plaintiff argues that Tomar has not met its burden of rebutting the presumption that 35 U.S.C. s. 112,

para. 6 does not apply in absence of the word "means." *See Phillips v. AWH, Corp.*, 415 F.3d 1303, 1311 (Fed.Cir.2005). In addition, the plaintiff contends that the term "controller" would be understood by one of ordinary skill in the art to have a structural meaning, and, therefore, is not subject to 35 U.S.C. s. 112, para. 6. *See Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1360 (Fed.Cir.2004).

[16] [17] [18] Claim language not containing the term "means" is presumptively not subject to means-plus-function construction under section 112 para. 6. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed.Cir.2002). The presumption may be overcome if the claim term fails to recite sufficiently definite structure or recites function without reciting sufficient structure to perform that function. *Id.* (quoting *Watts*, 232 F.3d at 880). *Tomar*, however, fails to overcome this presumption. Here, one of ordinary skill in the art would understand "controller" to refer to a specific type of circuitry, and "circuitry" has been found in other cases to connote structure. *See The Massachusetts Institute of Technology and Electronics for Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1355-56 (Fed.Cir.2006) (stating that "circuit" combined with a description of the function of the circuit connotes sufficient structure). The claim language does not merely describe a controller, but adds further structure by describing the operation of the controller. *See '578 patent*, 9:14-18 (claiming that the controller is used to activate light emitting diodes and produce warning light signals). Accordingly, the description of the operation of a controller is sufficient to avoid section 112 para. 6, and *Tomar's* indefiniteness argument is rejected.

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