IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

SIPCO LLC, *et al.*	:	**CIVIL ACTION**
	:	
v.	:	
	:	
THE TORO COMPANY, *et al.*	:	**NO. 08-0505**

MEMORANDUM OPINION

Savage, J. **February 10, 2009**

In this patent infringement action, SIPCO, LLC and Advanced Sensor Technology, Inc. (collectively, "SIPCO") allege that the defendants The Toro Company, JLH Labs, LLC and Jason Hill (collectively, "Toro") infringed United States Patent No. 7,103,511 ("'511 patent"), entitled "Wireless Communication Networks for Providing Remote Monitoring of Devices" by the manufacture, distribution and sale of Toro's Turf Guard System used to monitor golf greens and fairways. Toro insists that its system does not incorporate all the elements of the '511 Patent.

As is typical in a patent case, the parties disagree on the meaning of several terms in the patent claims. Accordingly, pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996), the claims language must be construed.

Claim Construction

Patent infringement analysis proceeds in two steps: first, the meaning of the claim language is construed; and second, the accused product or process is viewed in light of the construed claims. The patent claims, which delineate the metes and bounds of the

exclusive rights claimed by the patent applicant, are found in the patent specification,[1] which is one element of a patent application. 37 C.F.R. § 1.77.

In this case, there are three categories of claims construction: (1) language about which there is no dispute because the parties agree upon the construction; (2) language that is not really disputed but one of the parties seeks to add additional language for clarification purposes; and (3) claims that the parties dispute.

Central to the dispute is the prosecution history. Toro contends that positions taken by the patentee before the Patent and Trademark Office ("PTO") and the Board of Patent Appeals and Interferences ("Board") contradict and are inconsistent with positions taken by SIPCO now. Thus, the claims construction will turn, in part, on the significance of the prosecution history.

Claim construction is a matter for judicial determination. *Markman*, 517 U.S. at 372. The analysis begins and remains focused on the language of the claims themselves because that is what the inventor used to describe his invention. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (*citing* 35 U.S.C. § 112, ¶ 2).

Claim language is generally given its "ordinary and customary meaning." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Patents are "addressed to and intended to be read by" those skilled in the field of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006) (citations

[1] In addition to the claims, the specification includes a title, cross references to related applications, a statement regarding government rights, background on the field of the invention and the related art, a summary of the invention, a brief description of the drawings included in the application and a detailed description of the invention. 37 C.F.R. § 1.77(b).

omitted). Thus, a term's "ordinary and customary meaning" is what it would be to a "person of ordinary skill in the art in question at the time of the invention." *Id.* (*citing Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). *See also Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F. 3d 1366, 1371 (Fed. Cir. 2007) ("Claim terms are entitled to a 'heavy presumption' that they carry their ordinary and customary meaning to those skilled in the art in light of the claim term's usage in the patent specification.").

Claim terms should be construed to preserve their validity. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1356 (Fed. Cir. 1999) (citations omitted). The context in which a term is used in the claim can be "highly instructive." *Phillips*, 415 F.3d at 1314. The words surrounding a disputed term may help suggest whether a proposed construction is redundant or incorrect. Additionally, the use of a term in other claims of the patent is informative because terms are normally used consistently throughout the patent. *Id*.

The Federal Circuit has emphasized the importance of the specification in claim construction. *See id.* at 1315. "[C]laims must be read in view of the specification, of which they are a part." *Markman*, 52 F.3d at 979 (citations omitted). The specification's written description of the invention "must be clear and complete enough to enable those of ordinary skill in the art to make and use it." *Vitronics*, 90 F.3d at 1582. Indeed, the specification is the "'single best guide to the meaning of a disputed term.'" *Phillips*, 415 F.3d at 1315 (*quoting Vitronics*, 90 F.3d at 1582).

However, if during prosecution before the PTO a patent applicant has argued a limitation of the scope of a claim (usually with the purpose of overcoming prior art), the

ordinary and customary meaning of a claim term may not apply. *Vitronics*, 90 F.3d at 1582-83. Although the prosecution history

> often lacks the clarity of the specification and thus is less useful for claim construction purposes . . . . the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.

Phillips, 415 F.3d at 1317 (citations omitted). Accordingly, the court examines "the patent's prosecution history, when placed in evidence, to determine whether the inventor disclaimed a particular interpretation of a claim term during the prosecution of the patent." *Ventana Medical Systems, Inc. v. Biogenex Labs.*, 473 F.3d 1173, 1182 (Fed. Cir. 2006).

Where the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer prevents it from later expanding the scope of the invention. *800 Adept, Inc. v. Murex Secs., Ltd.*, 539 F.3d 1354, 1364 (Fed. Cir. 2008) (citing *Omega Eng'g v. Raytek Corp.*, 334 F.3d 1314,1324-25 (Fed. Cir. 2003)).[2] When applied, prosecution disclaimer narrows the ordinary meaning of the claim congruent with the scope of the surrender. *Id.*; *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1345 (Fed. Cir. 2005) (to overcome an obviousness rejection, applicant distinguished his invention based on prior art disclosing "slightly concave" inner walls; the "inescapable consequence of such an argument is that the scope of applicant's claims

[2] Prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution. *See Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1347 (Fed. Cir. 1998); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319, 1325 (Fed. Cir. 2002) ("Explicit arguments made during prosecution to overcome prior art can lead to narrow claim interpretations because '[t]he public has a right to rely on such definitive statements made during prosecution.'") (quoting *Digital Biometrics*, 149 F.3d at 1347).

cannot cover inner walls that are 'slightly concave'"); *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1372-73 (Fed. Cir. 2005) ("Where an applicant argues that a claim possesses a feature in order to overcome a prior art rejection, the argument may serve to narrow the scope of otherwise broad claim language.").

Conversely, the doctrine is not applied where the alleged disavowal of claim scope is ambiguous or vague. *See N. Telecom Ltd. v. Samsung Electrs. Co., Ltd.*, 215 F.3d 1281, 1295 (Fed. Cir. 2000) (where the inventors' statements were amenable to multiple reasonable interpretations, court deemed the remarks too ambiguous to apply doctrine); *Rexnord Corp. v. Laitram Corp.,* 274 F.3d 1336, 1347 (Fed. Cir. 2001) (refusing to limit the ordinary meaning of the claim because the alleged disclaimer in the file wrapper was at best "inconclusive"); *Schwing GmbH v. Putzmeister Aktiengesellschaft,* 305 F.3d 1318, 1324 (Fed. Cir. 2002) (Prosecution history "cannot be used to limit the scope of a claim unless the applicant took a position before the PTO that would lead a competitor to believe that the applicant had disavowed coverage of the relevant subject matter."). In sum, for prosecution disclaimer to attach, the alleged disavowing actions or statements made during prosecution must be clear and unmistakable, as well as demonstrate reasonable deliberateness. *Omega Eng'g*, 334 F.3d at 1326; *N. Telecom,* 215 F.3d at 1294-95.

Because a claim's ordinary and customary meaning often is not readily apparent, sources that shed light on how a person of ordinary skill in the art would understand the claim language may be helpful. *Phillips*, 415 F.3d at 1314. In the claim construction process, "the words of the claims themselves, the remainder of the specification, [and] the prosecution history" are considered intrinsic evidence of primary importance. *Id.* In addition, "extrinsic evidence concerning relevant scientific principles, the meaning of

technical terms, and the state of the art" may be consulted. *Id.* However, because the universe of extrinsic evidence is boundless and such evidence is not created at the time of the patent or for the purpose of explaining the patent's scope, it is considered less reliable than intrinsic evidence. *Id*. at 1318-19. Therefore, extrinsic evidence should be used only when intrinsic evidence is insufficient to resolve claim interpretation disputes.

In claim construction, the patent language must not be rewritten even when it may be clearer if done so. *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008). A court must not attempt to say what it believes the inventor meant to say. The language is what it is. An attempt to clarify could mistakenly add or subtract requirements. If the inventor or his attorney could not get it right, it is not for a court to correct. *See K-2 Corp.v. Salomon S.A.*, 191 F.3d 1356, 1364-65 (Fed. Cir. 1999). Nor can language be engrafted onto existing language to accommodate the dispute solely for the purpose of aiding jury comprehension. *See 800 Adept Services*, 539 F.3d at 1366-67 (trial court erred when, in an effort to help the jury better understand a claim, it added a sentence to its original claim construction, and the modified construction was incorrect).

In other words, courts should avoid the temptation to write claim language in what appears to be a better way. Adherence to the original meaning of the patentee whenever possible is the paramount principle. *See Resonate, Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1365 (Fed. Cir. 2003); *Texas Instruments, Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993) ("Courts can neither broaden nor narrow the claims to give the patentee something different than what he has set forth."). On the other hand, the patentee cannot use claim construction to expand the scope of the original patent to curtail or prevent the development and use of similar and improved products.

The ‘511 Patent

The ‘511 patent “generally relates to systems for monitoring and/or controlling a plurality of remote devices via a host computer connected to a wide area network,” and “provides wireless communication networks for providing remote monitoring of devices.” (Col. 1:31-36; Col. 2:28-29). It focuses on ways to monitor remote devices using wireless communications technology.

Remote devices that could be employed under this patent include sensors, actuators, smoke detectors, thermostats, utility meters and security devices. (Col. 4:52-55; Col. 6:49-51). The other primary components of the wireless communication networks disclosed in the patent are: wireless communication devices, consisting of wireless transceivers, transmitters or repeaters; a site controller; a wide area network (“WAN”), which is the internet or intranet; and an application server or host, such as a laptop or workstation. One embodiment of the invention is an automated monitoring system that may include sensors to be monitored by being read, and actuators to be controlled through an applications server via a site controller. (Col. 2: 29-37).

Of the 29 claims in the patent, five are independent. In four of the five independent claims, each of the plurality of wireless transceivers (or wireless communication means) is to be configured to do, at a minimum, two things: (1) receive a sensor data signal from a remote device and transmit an original data message using a predefined wireless communication protocol, the original data message comprising the corresponding unique identifier and sensor data signal; and (2) receive the original data message transmitted by one of the other wireless transceivers and transmit a repeated data message using the predefined wireless communication protocol, the repeated data message including the

sensor data signal and the corresponding unique identifier.

The parties agree on the meaning of eight terms appearing throughout the claims, and dispute the construction of nineteen terms. Thus, where necessary, we shall construe the disputed terms.

Construction of Claim Terms in Dispute

"Wireless Transceivers Having Unique Identifiers" (Claims 1, 13 and 20)

SIPCO proposes a construction of the entire phrase "wireless transceivers having unique identifiers," whereas Toro wants the terms "wireless transceiver" and "unique identifiers" construed separately.

SIPCO's proposed construction is: "two-way wireless communications devices known as radio frequency (RF) transceivers each having their own identifier that uniquely identifies the wireless transceiver vis-a-vis other wireless transceivers in the wireless communication network." With respect to the definition of "wireless transceiver," Toro agrees with SIPCO that it is a "two-way wireless communications device known as a radio frequency (RF) transceiver," but wants to add specific language regarding three different concepts. Specifically, Toro proposes to: (1) give examples of additional components/accessories that could complement the device, (2) state that the transceiver "is not a stand-alone repeater," and (3) state that the transceiver is "integrated with a remote device such as a sensor." With respect to the meaning of "unique identifier," Toro wants: "an identifier, such as an address, that is different from all of the other identifiers in the wireless communication network."

Toro wants the definition of "wireless transceiver" to include structure beyond a radio-frequency transceiver because all of the independent claims require the wireless

transceivers to be configured to perform several recited functions, which they cannot do without additional structures. It reaches into the written description (*i.e.,* Figure 2) and imports components into the claims that are found only in the preferred embodiment of the disclosed wireless transceiver.

Toro's reading examples into the claim violates the preferred embodiment rule. Under this rule, claim terms are not limited to a preferred embodiment described in the specification. *Phillips*, 415 F.3d at 1323; *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1286 (Fed. Cir. 2005); *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1264 (Fed. Cir. 2003) (a basic canon of claim construction is that one may not read a limitation into a claim from the written description).

By importing components into the claims that are found only in the preferred embodiment, Toro's proposed language goes beyond what is necessary to define "transceiver" in violation of the preferred embodiment rule. Thus, the court rejects its proposal to construe a "wireless transceiver" as "complemented by" various devices.

In support of its proposal that "wireless transceiver" be construed as "not a stand-alone repeater," Toro points to several sources that purportedly distinguish between the "wireless transceivers" and "repeaters" in the claims. First, it argues that because the term "repeater" is found only in the dependent claims, and the relevant dependent claims contain both the terms "repeaters" and "wireless transceivers," construing them to be the same structures fails to give effect to all the terms in the claim. Second, relying on the doctrine of claim differentiation,[3] it contends that the presence of a dependent claim that

[3] Under this doctrine, when different words or phrases are used in separate claims, there is a presumption that the claims have different meanings and scope. *Seachange*, 413 F.3d at 1368-69.

adds a particular limitation gives rise to a presumption that the limitation is not present in the independent claim. Third, it argues that the Summary distinguishes between "wireless transceivers" and "repeaters" when it states that "sensors and/or actuators are in communication with the plurality of wireless transceivers, . . . Additional communication devices, such as wireless repeaters, may relay information between the wireless transceivers." (Col. 2:39-47).

Finally, and most heavily relied upon by Toro to argue that "wireless transceiver" be construed as "not a stand-alone repeater," it contends that the prosecution history reveals that the patentee unambiguously distinguished the "wireless transceivers" of the invention from "stand-alone repeaters" of the prior art (the '491 patent). Specifically, Toro contends that the patentee argued that in the '491 patent, only stand-alone repeaters could transmit a repeated data message, whereas in the '511 patent, the wireless transceivers were configured to both receive an original data message and transmit a repeated data message from another wireless transceiver.

In response, SIPCO contends that not only was there no "prosecution disclaimer" regarding the meaning of this term, but that Figure 1 in the '511 patent directly contradicts the distinction that Toro is trying to make. It asserts that the only distinction between the "transceivers" and "repeaters" of the '511 patent is in the content of the messages they transmit. Specifically, the independent claims require a first group of two-way wireless communication devices called "wireless transceivers" to: (i) have a unique identifier; (ii) receive a sensor data signal from a remote device; (iii) transmit an original data message (comprising the corresponding unique identifier and sensor data signal); (iv) receive the original data message transmitted by one of the other wireless transceivers; and (v)

transmit a repeated data message. The dependent claims require a second group of two-way wireless communication devices called "repeaters" to (i) have a unique identifier; (ii) receive the original data message transmitted by one of the other wireless transceivers; and (iii) transmit a repeated data message, which are the same as (i), (iv) and (v) of the above independent claims. Therefore, SIPCO argues, if a wireless communication device in a system receives and transmits the content described in the above dependent claims, such a device is a "repeater" of the dependent claims.

SIPCO asserts that the patentee made the same "content-based" argument in distinguishing the prior art. It asserts that he argued that stand-alone devices in the '491 patent could not meet all of the limitations of the independent claims because they could not communicate with each other and could transmit only original data messages but not repeated data messages, and the independent claims of '511 require the transceiver to be able to transmit both original and repeated data messages. Its argument was essentially that no device in the '491 patent could receive and transmit both an original data message and a repeated message; and, therefore, the '491 patent did not meet the content requirements of the claims. The patentee did not disclaim coverage of transceivers on the basis that they are "stand-alone" or called "repeaters."

SIPCO also points out that the dependent claims that recite "repeaters" are open-ended, as shown by the word "comprising."[4] Therefore, the use of the term "comprising"

[4] In patent law, the customary meaning of the transitional term "comprising" is that the recited elements are only a part of the invention and that the claim does not exclude additional, unrecited elements. *Free Motion Fitness, Inc. v. Cybex Int'l, Inc.*, 423 F.3d 1343, 1347 (Fed. Cir. 2005). Claims that use "comprising" are referred to as "open" or "open-ended" claims. *Id.* at 1350-51. The claim term "including" is synonymous with "comprising." *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1345 (Fed. Cir. 2003).

shows that the claim recites the *minimum* set of attributes a "repeater" must have, and does not exclude the presence of other attributes, such as the ability to receive sensor data signals from a remote device. Additionally, because "stand-alone" is not mentioned in the claims, Toro is trying to impose a negative limitation.

Finally, SIPCO points to Figure 1, which shows both repeaters and transceivers that are both stand-alone and not stand-alone, demonstrating that transceivers are interchangeable devices. (*See* SIPCO's Resp. Br. at 13-14).

There is no basis upon which to exclude "stand-alone" devices in construing the term "wireless transceiver." There was no prosecution disclaimer where the patentee distinguished the "wireless transceivers" of his invention from "stand-alone repeaters" of the prior art. Such a disclaimer would had to have been unambiguous and clear, and the prosecution history reveals neither. Toro's language "not a stand-alone repeater" is an unnecessary and unwarranted negative limitation. *Omega Eng'g*, 334 F.3d at 1322-23.

In support of its proposal to construe "wireless transceiver" as "integrated with a remote device such as a sensor or sensor/actuator," Toro argues that because all of the independent claims contemplate that a wireless transceiver "be configured to receive a sensor data signal from one of the plurality of remote devices," this "implies" that each remote device is "integrated" with a wireless transceiver. It also cites an example from the specification, which states that "each sensor. . . is integrated with a suitably configured wireless transceiver/repeater." (Col. 4:28-34).

In response, SIPCO argues that Toro is impermissibly reading "integrated" into the claims because: (1) the language of the claims does not require "integration" - all it requires is that the wireless transceiver receive a sensor data signal from a remote device; (2) it

violates the doctrine of claim differentiation since independent claims 1, 8, 13 and 20 do not mention "integrated," but independent claim 27 does, showing that "integrated" is *not* a limitation of claims 1, 8, 13 or 20; (3) the specification expressly explains three ways that "integration" can be accomplished; (4) in his First Response and Amendment, the patentee added claim 27, which contained an "integration" requirement, knowing that the earlier claims 1, 8, 13 and 20 had no such requirement; (5) if Toro's definition is plugged into claim 27, the result is redundant and circular; and (6) Toro is impermissibly reading examples from the specification.

Where the language is not in the claim, the court may not read examples into unambiguous claims because to do so would violate the preferred embodiment rule. *Phillips*, 415 F.3d at 1323; *SanDisk Corp.*, 415 F.3d at 1286. Additionally, because independent claims 1, 8, 13 and 20 do not mention "integrated," but independent claim 27 does, under the doctrine of claim differentiation, this shows that "integrated" is *not* a limitation of claims 1, 8, 13 or 20. *See Seachange*, 413 F.3d at 1368-69. Therefore, because the claims are unambiguous, and the doctrine of claim differentiation applies, the term "integration" will not be read into the claims.

Regarding the construction of "unique identifiers," SIPCO proposes a construction of the entire phrase "wireless transceivers having unique identifiers" (whereas Toro wants the court to construe the terms "wireless transceiver" and "unique identifiers" separately) because the "unique identifiers" are a special attribute of the wireless transceivers. It argues that the definition "each having their own identifier that uniquely identifies the wireless transceiver vis-a-vis other wireless transceivers in the wireless communication network" is necessary because for any wireless transceiver, one must be able to formally

identify it based on its relationship to the others in the network.

Toro wants to construe "unique identifier" as "an identifier, such as an address, that is different from all of the other identifiers in the wireless communication network."

One skilled in the art would know what a unique identifier is. In addition, in its proposed construction of "unique identifier," SIPCO uses the words "uniquely identifies." As this is essentially repeating the words to be defined, it is not helpful. Thus, there is no need to define "unique identifiers."

"Wireless transceivers having unique identifiers" will be construed as: "two-way wireless communications devices known as radio frequency (RF) transceivers having unique identifiers."

"Remote Devices" (Claims 1, 8, 13, 20 and 27)

Toro proposes that "remote devices" be construed as "devices integrated with the 'wireless transceivers' of claims 1, 8, 13, 20 and 27. . . , such as sensors or sensor/actuators." It contends that this definition is necessary to avoid "possible confusion" between "remote devices" on the one hand, and "wireless transceivers" on the other.

SIPCO argues that construction of this term would not add any value to the understanding of the term or claim because whenever the term "remote device" appears in the claim, the claim itself provides any needed context, and there is no confusion or difficulty in differentiating between remote devices and wireless transceivers. It also objects to Toro's proposed use of "such as sensors or sensor/actuators" because "remote devices" is broader than "sensors or sensor/actuators," and therefore this construction impermissibly narrows the claims' scope by equating the claim with examples identified in the preferred embodiment. Additionally, for all of the same reasons it objected to its use

in the construction of “wireless transceivers,” SIPCO also objects to using “integrated” in the definition of this term.

Although it sees no need to change or add to the claim language, SIPCO will accept the words “devices that are monitored or controlled via a host computer connected to a wide area network” for construction of “remote devices.”

The language in the claims is clear. There is no need to construe this term.

“Controlling” (Claims 1, 8, 13 and 20)

Toro wants to define the term “controlling” as “exercising influence or direction . . . during operation such as by sending control signals to remote devices.” It contends that the word “controlling” alone is limiting.

SIPCO is content to leave the word as it is. However, it does not oppose adding the words “exerting influence or direction over.”

Toro argues that the specification and prosecution history contemplate “active control” which occurs “during operation.” The portions of the specification on which Toro relies include: “After initializing, and during normal operation, the site controller may poll each of the remote sensor/actuators according to a predetermined schedule;” “During normal operation, the transceiver may receive a command message;” and “The site controller may communicate the data and/or control signals.” Regarding the prosecution history, Toro points to the applicant’s statement that the localized systems taught in the ‘491 patent merely monitor physical characteristics like vibration or temperature, whereas the independent claims of the ‘511 patent enable actuators to be controlled.

SIPCO’s response is that nothing in the prosecution history shows that the patentee intended “active control.” SIPCO asserts that the patentee did not argue that the ‘491

patent had passive control and the '511 patent had active control. Rather, the patentee argued that the '491 patent lacked entirely the claimed controlling feature, and had the capability of only "monitoring." Additionally, SIPCO notes that the specification provides an example of a command that can be made *before*, *during or after* operation of a remote device - a command to change actuator settings. Finally, SIPCO points out that Toro's definition uses the word "control" to define "controlling," which is not helpful to the trier of fact.

There is no prosecution disclaimer showing that the patentee intended "controlling" to mean "occurring during operation." Not only does the prosecution history fail to clearly and unambiguously demonstrate that the patentee took this position, it is not supported at all. In addition, Toro's proposal contains an example and not a definition. The "such as" language is unnecessary. Therefore, there is no need for additional and clarifying language, and the term will not be construed.

"Original Data Message" (Claims 1, 2, 8, 9, 13, 14, 20, 21, 27)

Contending that "original data message" is "expressly defined in the claims," SIPCO argues that the term is sufficient as it is. It asserts that there is no need to construe the term because the claims expressly define the content of the original data message and which transceiver transmits it,[5] and the parties agree to which device the unique identifier

[5] Specifically, the claims state that the "original data message compris[es] the corresponding unique identifier and the sensor data signal," and that the transceiver that "receive[s] the sensor data signal from one of the plurality of remote devices transmit[s the] original data message." (Col. 23: 27-32; Col. 24:32-34; Col. 25:24-26; Col. 26: 21-23).

and sensor data signal refer.[6] Nevertheless, SIPCO will accept the following definition of the entire phrase "original data message comprising the corresponding unique identifier and sensor data signal": "A data message that is transmitted by the wireless transceiver that receives a sensor data signal from one of the plurality of remote devices and includes: (a) the corresponding unique identifier of that wireless transceiver; and (b) the sensor data signal that that wireless transceiver received from the remote device."

Toro proposes similar language to SIPCO's alternate proposed construction, but wants additional language to make clear that the message is an "original" one. It proposes: "a data message that *originates* from the wireless transceiver that receives a sensor data signal . . ." (emphasis added).

The term "original data message" needs no construction because it is expressly defined in the claims. Moreover, except for the term "originate," the parties agree about what that meaning is. It is almost verbatim of the definition provided in the claims themselves. Inserting the parties' proposed construction into the claims would render them redundant. Further, the term "originates" is not helpful because it is a form of the word "original," which needs no explanation.

"Repeated Data Message" (Independent Claims 1, 8, 13 and 20)

The parties agree that the "repeated data message" of the independent claims is a data message transmitted by a wireless transceiver that receives an original data message from one of the other wireless transceivers and includes the sensor data signal

[6] The parties agree that the "corresponding unique identifier" of the original data message refers to the unique identifier of the transceiver transmitting the original data message, and that the "sensor data signal" refers to the sensor data signal that the transmitting transceiver receives from a remote device.

of the original data message and the "corresponding unique identifier." The dispute is over what corresponds to the "corresponding unique identifier." SIPCO contends the "corresponding unique identifier" belongs to the wireless transceiver that sent the original data message. Toro states that the "corresponding unique identifier" pertains to the wireless transceiver that is sending the repeated data message.

SIPCO asserts that "repeated data message" needs no construction other than to resolve the dispute between the parties about what relates to the "corresponding unique identifier." In support of its interpretation that it refers to the same unique identifier included in the "original data message," *i.e.,* the "unique identifier" of the wireless transceiver that sent the "original data message," SIPCO argues that the only way the "repeated data message" can "repeat" the content of the original data message is to include a repeat of the content of the data contained in the original data message, which, the parties agree, includes the corresponding unique identifier of the transceiver transmitting the original data message. SIPCO also points to the parallel language structure throughout the independent claims with respect to what the "original data message" includes and what the "repeated data message" includes, namely the "sensor data signal" and the "corresponding unique identifier." Further, because the dependent claims expressly recite that the "repeated data message" includes the unique identifier *of the repeating device*, the doctrine of claim differentiation teaches that when the patentee intended to have the repeated data message include the unique identifier of the repeating device, the claims expressly recite that intention. Thus, SIPCO argues, because the patentee chose not to expressly recite in the independent claims that the repeated data message includes the unique identifier of the repeating device, but did choose to expressly recite that requirement in the

dependent claims, the "corresponding unique identifier" is that of the wireless transceiver that sent the "original data message."

Toro argues that if the patentee had intended the "corresponding unique identifier" to belong to the wireless transceiver sending the original data message, the claim would have read: "further configured to receive and repeat the original data message transmitted by one of the other wireless transmitters," and there would have been no need to call it a "repeated data message."[7] It also contends that the fact in the dependent claims the unique identifier corresponds to the repeater shows that each wireless transceiver adds its own unique identifier when repeating a message.

Although Toro raises legitimate arguments and the patentee could have drafted this aspect of the claims more clearly, SIPCO's construction makes more sense. In addition, at the start of the paragraph that recites the contents of an "original data message" and a "repeated data message," the claim reads: "a plurality of wireless transceivers having unique identifiers." This provides additional support for the construction that the unique identifier refers to the wireless transceiver that sent the original data message.

The "repeated data message including the sensor data signal and the corresponding unique identifier" is construed to mean: "the repeated data message being a data message transmitted by a wireless transceiver that receives an original data message from one of the other wireless transceivers and includes: (a) the corresponding unique identifier of the wireless transceiver that sent the original data message; and (b) the

[7] The claim currently reads: "further configured to receive the original data message transmitted by one of the other wireless transmitters and transmit a repeated data message . . ., the repeated data message including the sensor data signal and the corresponding unique identifier."

sensor data signal of the original data message."

"Repeated Data Message" (Dependent Claims 2, 9, 14 and 21)

The parties essentially agree on the meaning of the term "repeated data message." SIPCO argues that there is no need to construe this term because the claims expressly define the content of the "repeated data message," and because the parties agree to that definition. SIPCO provides an alternate construction, which closely tracks the language in the claims and is almost identical to the construction proposed by Toro. Toro provides no explanation why construction of this term is necessary.

There is no need to construe this simple term.

"Repeaters" (Claims 2, 14 and 21)

The parties agree that "repeaters" are two-way wireless communication devices. They disagree on the additional detail needed to construe this term. Specifically, SIPCO proposes: "two-way wireless communication devices that operate in the manner recited in the claims." Toro's proffered construction is "stand alone two-way wireless communication devices that are not integrated with remote devices."

As explained earlier in the construction of "wireless transceivers," repeaters do not have to "stand alone." In addition, as shown in Figure 1 of the '511 patent, "repeaters" can be "integrated" with a remote device. Therefore, the term "stand alone" is not necessary nor does "not integrated with remote devices" add anything.

SIPCO's construction will be adopted. It reflects both the parties' agreement and that the claims recite how the repeaters operate. Specifically, the claims state that "each of the repeaters is in communication with at least one of the plurality of wireless transceivers and configured to receive the original data message transmitted by at least

one of the . . . wireless transceivers and transmit a repeated data message . . .” The terms “original data message” and “repeated data message” are already defined.

“Sensor Data Signal” (Claims 1, 2, 8, 9, 13, 14, 20, 21 and 27)

Offering nothing to support its proposed construction, Toro suggests that “sensor data signal” be construed as “a message containing information collected or obtained from a remote device.” Although SIPCO believes no construction of this term is necessary, it is willing to accept “a signal containing sensor data.”

The language is clear. There is no need to construe the term.

“Plurality of Customers” and “Organization” (Claim 27)

SIPCO contends that the terms “plurality of customers” and “organization” need no construction or clarification because their meanings are plain. Toro wants to define “plurality of customers” as “two or more individuals or entities who are customers of the ‘organization’ referred to in Claim 27.”

In support of its proposed construction, Toro argues that the claim is disclosed and enabled by an example in the specification in which a managed apartment complex is the “organization,” the residents of the individual apartments in the complex are the “customers” of the “organization,” and the residents are able to monitor and/or control the status of their security system. (Col. 20: 29-45).

SIPCO’s response is that Toro is improperly reading limitations from the specification into the claims. All that is required of “customers” in the claim, SIPCO argues, is that the wireless communication network enables them to monitor at least one remote device via a WAN, but Toro’s construction adds limitations that are not in the claim. (*See* Tr. at 101-102). In addition, SIPCO points to another embodiment in the specification that

it contends compels a different construction - that "customers" are *not* required to be customers of the "organization."[8]

The term "organization" presents an interesting problem. The parties agree that Claim 27 describes an "organization" as the entity being provided access to wireless communication network of the claim. (*See* Tr. at 99, 103). Toro defines it as "an entity that provides services to the 'plurality of customers,'" but does not explain why the words "providing services" are necessary to understand the term. SIPCO responds that because the claims do not refer to "services," Toro's proposed construction impermissibly incorporates limitations from a preferred embodiment into the claims.

The terms "plurality of customers" and "organization" need no construction. The term "plurality" is commonly understood to mean "two or more," and as such needs no explanation. Toro's proposed construction of "customers" is not helpful because it defines "customer" with reference to the word "customers." Additionally, because the claims are silent as to the relationship between the customer and the organization, and the written description does not require the "customers" to be customers of the "organization," Toro's construction impermissibly reads a limitation from a preferred embodiment into the claim. No construction of "plurality of customers" is necessary.

The term "organization" is defined in the claims and needs no construction.

[8] The example SIPCO provides is where residents of a housing development are able to read their electric meters because the town contracted with someone to get access to the wireless network. In the example, the residents are "customers" of the electric company, which is enabling them to remotely monitor their meters, and the development is the "organization" being provided access to the network. The residents are clearly not "customers" of the development. (*See* Col. 20:50-62; Tr. at 109).

"Integrated" (Claim 27)

Toro argues that "integrated" needs no further construction because its meaning is plain and ordinary. SIPCO proposes a long, expansive definition that describes *how* remote devices can be integrated with wireless transceivers.

Rather than explain *what* "integration" means, SIPCO's definition reaches into the specification and extracts, from the preferred embodiment, examples of *ways* to integrate the devices. (*See* Col. 8:58-Col. 9:2). SIPCO's construction impermissibly limits when remote devices would be considered to be integrated with wireless transceivers. SIPCO's proposed construction goes well beyond the construction of the term and is an attempt to expand the scope of the patent by impermissibly narrowing the meaning of "integrated."

"Integrated" means to form, unify or combine with another to form a whole. (Random House Unabridged Dict. 2006). The only claim that uses the term "integrated" is claim 27. The meaning of "integrated" is clear from the express language in the claim. Therefore, the term needs no construction.

"Primary Wireless Communication Network Associated With An Automated Monitoring System" (Claim 20)

The parties agree that this term is a "wireless communication network associated with an automated monitoring system that is separate from the wireless communication network referred to in the preamble of Claim 20." Toro wants to expand the definition of this primary wireless network to include "at least wireless transceivers and a site controller," and wants a reference to Figure 11 as an example. It also wants to limit the definition of the wireless communication network referred to in the preamble of claim 20 to "not include a site controller." SIPCO argues that Toro's construction improperly reads limitations into

the claim. It contends that because claim 20 does not expressly require the primary wireless communication network to include "transceivers" or a "site controller," and does not limit the structure of the "primary wireless communication network" other than that it be "wireless," Toro's construction impermissibly reads limitations from the preferred embodiment disclosed in Figure 11 into the claim. SIPCO also argues that although claim 20 does not expressly recite that the "wireless communication network" referred to in the preamble include a site controller, the open-ended term "comprising" in the preamble shows that such a component could be included in this network.

SIPCO is correct that Toro's construction that this primary wireless communication network includes "at least wireless transceivers and a site controller" improperly reads limitations from the preferred embodiment. *See Phillips*, 415 F.3d at 1323. In addition, Toro's proposal to limit the definition of the "wireless communication network" referred to in the preamble of claim 20 to "not include a site controller" impermissibly narrows the claim by precluding additional components in this network. Thus, "primary wireless communication network associated with an automated monitoring system" is construed as: "A wireless communication network associated with an automated monitoring system that is separate from the wireless communication network referred to in the preamble of Claim 20."

"Site Controller" (Claims 1, 13 and 27)

The core of the dispute between the parties in construing "site controller" is defining what the site controller actually does. SIPCO claims that it facilitates communications between transceivers and the wide area network. The defendant argues that it is more than a facilitator. Accordingly, Toro wants to provide specific details of how it works so that

its function as more than a facilitator becomes clear.[9]

In the patent, there is language that supports Toro's contention that the site controller is more than a facilitator. As recited in the claims, the minimum requirements of the site controller are that it: (1) communicate with at least one of the wireless transceivers; and (2) be configured to receive the original and repeated data messages, identify the remote device associated with the corresponding sensor data signal, and provide information related to the sensor data signal to the WAN for delivery to the host computer. (*See* claims 1, 27). Based on these claims requirements, the site controller appears to relay, at a minimum, information between the wireless transceivers and the WAN.

The Summary of Invention and written description of the patent support this construction, but also provide examples of ways that the site controller can manage the data that it is required to relay between the wireless transceivers and the WAN. The Summary provides that the site controller "may manage communications between the wireless communication network and a host computer connected to a WAN." (Col. 3:26-29). The written description provides that the site controller, in one possible embodiment: "acts as communications master" (Col. 15:50); "monitors the operational status of the wireless communication devices" (Col. 15:55-56); "orchestrates communications with the wireless communication devices" (Col. 15:58-59); "maintains current databases of information regarding the automated monitoring system" (Col. 15:60-61); "controls communications with the applications server" (Col. 16:1-2); "maps all of the wireless communication devices to learn their unique addresses and communication paths" (Col.

[9] For example, Toro wants to state that the site controller "enables a host computer connected to the WAN to monitor and control remote devices," and "creates and maintains a self-contained database of information regarding each wireless transceiver in the automated monitoring system."

16:30-34); and “to facilitate communications with the applications server, . . . maintains database files.” (Col. 17:36-38).

Additionally, dictionary definitions of the terms “controller,” “facilitator,” “relay,” and “manage” support the concept that a site controller manages and relays data between the wireless transceivers and the WAN, which is more than mere facilitation. Technical dictionaries recite that a “controller” is “a device between a host and terminals that relays information between them” and “controls data transfer between two devices.” (Newton’s Telecom Dictionary, 1996; McGraw-Hill Illustrated Telecom Dictionary, 1998). Non-technical dictionaries define “controller” as “a regulating mechanism,” and, in the context of a computer, as “the key component of a peripheral device that contains the circuitry necessary to interpret and execute instructions fed into the device.” (Random House Unabridged Dictionary, 2006).

“Facilitator” is defined in non-technical dictionaries as one who “makes easy or easier” (American Heritage Dict. of the English Language, 4th ed. 2006); and as one “responsible for leading or coordinating the work of a group.” (Random House Unabridged Dictionary, 2006). “Relay” (as a verb) is defined as: “to pass along by or as if by relay” (American Heritage Dict., 4th ed. 2006); and “to carry forward by or as if by relays: to relay a message.” (Random House Unabridged, 2006). “Manage” (as a verb) is defined as “to direct or control the use of, or to exert control over (The American Heritage Dict., 4th ed. 2006); “to have under control and direction; to conduct; to guide; to administer; to treat; to handle.” (Webster's Revised Unabridged Dictionary, 1996).

The definitions of “controller” encompass more than acting as a “facilitator.” Nevertheless, Toro’s proposed construction goes too far in describing what the site

controller does. Considering the language of the claims, as well as that of the specification, the site controller connects the transceivers and the wide area network. It manages and relays information between them.

"Site controller" is construed as: "A device that manages and relays data between the wireless transceivers and the wide area network."

"Wireless Communication Means" (Claims 8, 9)

When construing a claim that is written in means-plus-function form,[10] the court first determines the function of the means-plus-function limitation. *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). The next step is to look to the written description in the specification for the corresponding structure that performs that function. *Id.* However, the court "may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function." *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1097 (Fed. Cir. 2008) (citation omitted).

The parties agree that the "wireless communication means" limitation of claims 8 and 9 is written in means-plus-function form. They also agree as to the recited functions and the structures necessary to perform those functions. Specifically, they agree that the "wireless communication means" is: "a wireless RF transceiver 135 that includes an RF transceiver controller 210, a data interface 205, a microcontroller 215, a memory 220, and an antenna 225 and equivalents of these structures."

Unlike SIPCO, Toro proposes additional terms to construe "wireless communication

[10] An element of a claim is written in "means-plus-function" form when it is expressed as a means for performing a specified function without reciting structure in support of its function. 35 U.S.C. § 112, ¶ 6.

means." It wants the definition to state that the "wireless communication means" (1) is integrated with a remote device such as a sensor or sensor/actuator; and (2) is not a stand-alone repeater or repeater means.

SIPCO contends that because "integrated" is not "structure," it should not be included in the construction. It also argues that describing what is not a "wireless communication means" improperly imposes a negative limitation on the function.

For the reasons stated earlier in construing "wireless transceivers," Toro's request to define "wireless communication means" as "not stand alone repeater means" and as "integrated with remote devices" is improper. In addition, because only the structure that is necessary should be included in the construction, and Toro concedes that being "integrated" is not part of the necessary structure, "wireless communication means" is construed as: "A wireless RF transceiver 135 that includes an RF transceiver controller 210, a data interface 205, a microcontroller 215, a memory 220, and an antenna 225 and equivalents of these structures."

"Repeating Means" (Claim 9)

The parties agree that the "repeating means" limitation of claim 9 is written in means-plus-function form, and agree as to the recited functions and the structures necessary to perform those functions. Specifically, they agree that "repeating means" are: "a wireless transceiver/repeater 125 device, including transceiver 135 comprising an RF transceiver controller 210, a microcontroller 215, a memory 220, and an antenna 225 and equivalents thereof."

Toro proposes additional terms to construe "repeating means." It suggests a definition of "repeating means" as "stand-alone devices that are not integrated with remote

devices."

SIPCO contends that being "not integrated" does not describe the corresponding structure, which is an improper way to construe a means-plus-function claim. It argues that 35 U.S.C. § 112, ¶ 6 does not permit the incorporation of structure from the written description beyond what is necessary to perform the claimed function and, therefore, Toro's definition improperly imposes a negative limitation on the function. It also argues that defining the term in the negative (*i.e.,* not integrated), rather than by reciting what it *is*, does not clarify the meaning.

For the reasons stated earlier in the construction of "repeaters," repeaters do not have to "stand alone" and *can* be "integrated with a remote device." Consequently, Toro's proposed additional language is improper. In addition, because only the structure that is necessary should be included in the construction and Toro concedes that "integrated" is not part of the necessary structure, "repeating means" is construed as: "A wireless transceiver/repeater 125 device, including transceiver 135 comprising an RF transceiver controller 210, a microcontroller 215, a memory 220, and an antenna 225 and equivalents thereof."

"Configured" (Claims 1, 2, 13, 14, 20, 21, 27)

The plain and ordinary meaning of "configured" is clear. "Configured" is defined in a non-technical dictionary as "designed, arranged, set up, or shaped with a view to specific applications or uses: *a military vehicle that was configured for rough terrain; configured the computer by setting the system's parameters.*" (The American Heritage Dictionary of the English Language, 4th ed. 2006. Therefore, no construction of the term is necessary.

"Receiver Address" and "Sender Address" (Claims 4, 16 and 23)

Without offering any reason for doing so, Toro proposes adding language into the definition, specifically, "bytes in a data packet." This language is unnecessary and confusing, and results in an inaccurate construction of the terms.[11] The express language in the claims clearly defines the meanings of "receiver address" and "sender address." Thus, there is no need to construe these terms.

"Repeated Data Messaging" and "Repeated Data Message" (Claim 27)

SIPCO contends that "repeated data messaging" and "repeated data message" need no construction because the plain and ordinary meaning controls, but has provided a proposed construction. Toro proposes a construction that it contends "accurately tracks the language contained in the claim." Conceding that "claim 27, unlike the other claims, explicitly provides for two unique identifiers," it argues that construction is necessary to "avoid any confusion."

The terms need no construction because they are expressly defined in the claim. In addition, except for the word "originates," the parties essentially propose an identical construction, which is almost verbatim of the definition provided in the claims themselves. Thus, inserting the parties' proposed construction into the claims would render them redundant. Further, the term "originates" is not helpful because it is a form of the word "original," which needs no explanation. Therefore, no construction is necessary.

Conclusion

Pursuant to this memorandum opinion, the claims shall be construed as stated in the following Order.

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[11] For example, Toro's construction incorrectly implies that an address must consist of more than one byte, and that a site controller cannot receive or transmit a data packet.