

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND

MESH COMM, LLC,

*

Plaintiff,

*

v.

*

Civil Action No.: RDB-09-2804

PEPCO ENERGY SERVICES, *et al.*,

*

Defendants.

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MEMORANDUM OPINION

Plaintiff Mesh Comm, LLC (“Plaintiff” or “Mesh Comm”) brings this action against defendants PEPCO Holdings, Inc. (“PEPCO”) and Silver Spring Networks (“SSN”) (collectively, “Defendants”) alleging infringement of U.S. Patent No. 7,379,981 (the “’981 Patent”), “Wireless Communication Enabled Meter and Network.” Currently pending before this Court are requests of the parties that this Court construe certain claim language from the ‘981 Patent pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). Defendants have also moved for summary judgment on the ground that certain claims of the ‘981 Patent are invalid for indefiniteness. The issues have been fully briefed and this Court held a *Markman* hearing on October 1, 2010, at which argument was also heard concerning Defendants’ Motion for Summary Judgment. For the reasons that follow, Defendants PEPCO and SSN’s Motion for Summary Judgment (ECF No. 62) is DENIED. In addition, this Memorandum Opinion sets forth this Court’s construction of the claim language discussed during the *Markman* hearing.

BACKGROUND

The facts as set forth below are taken from the ‘981 Patent, Plaintiff’s Opening Claim Construction Brief (ECF No. 57), Defendants’ Responsive Claim Construction Brief (ECF No. 63), Plaintiff’s Reply Claim Construction Brief (ECF No. 69), Defendants’ Reply Motion for Summary Judgment (ECF No. 72), and evidence presented at the October 1, 2010 *Markman* hearing.

The ‘981 Patent is entitled “Wireless Communication Enabled Meter and Network” and involves technology designed to facilitate self-configuring, or ad hoc wireless networks. Specifically, the ‘981 Patent contemplates a system whereby a meter, such as a utility meter, is enabled for wireless communication and can communicate with other meters to create networks that enable data capture and transfer. *See* ‘981 Patent, col. 1, ll. 17-24. The purpose of such a system is to allow an end customer, for example a utility company, to remotely monitor and control utility (electricity, gas, etc.) usage to enhance efficiency. The underlying technology is essentially what is known in modern parlance as a “smart grid,” and offers several advantages over traditional wired networks of utility meters. *See* Pl.’s Opening Cl. Construction Br. at 2-3.

The technology allowing for the remote reading and monitoring of utility meters is not a new technology. ‘981 Patent, col. 1, ll. 28-50. Rather, the ‘981 Patent contemplates a system that builds on and improves existing technology. ‘981 Patent, col. 1, ll. 51-2:7. The self-configuring network described in the ‘981 Patent contains three principal components: (1) a “network cluster” made up of at least two wireless networks that are themselves composed of individual wireless transceivers called “virtual nodes” that measure, collect, and transmit utility usage data; (2) a “virtual gate” or “VGATE” that serves as a link between a virtual node and an external network; and (3) a “virtual network operations entity” or “VNOC” that functions to transmit, receive, and translate data from one format or medium to another.

The technology of the ‘981 Patent relies heavily on the Bluetooth wireless protocol.¹ *See* ‘981 Patent, col. 17, ll. 2-47. However, the technology is designed to overcome certain limitations inherent in the Bluetooth wireless protocol—namely, the fact that basic networks of Bluetooth devices, known as “piconets” are limited to a maximum of eight devices. *See* ‘981 Patent, col. 6, ll. 44-45; Defs.’ Resp. Cl. Construction Br. at p. 5 n3. In this regard, the technology in the ‘981 Patent describes a way to overcome this limitation by linking two or more piconets together to form “network clusters.” ‘981 Patent, col. 8, ll. 5-7. Specifically, the ‘981 Patent describes the process of linking Bluetooth piconets as “daisy chain[ing]” two or more piconets together to form a network cluster. *Id.* Each piconet is made up of individual virtual nodes that are described in the ‘981 Patent as “individually addressable entities enabled for wireless communication.” ‘981 Patent, col. 5, ll. 57-58. The ‘981 Patent describes the separate networks that form the network cluster as a “first network” and a “second network” that are connected to each other via virtual nodes that communicate with each other. ‘981 Patent, col. 8, ll. 13-16.

The “virtual gate” of the ‘981 Patent is essentially a connection between a Bluetooth network cluster and an external network. *See* ‘981 Patent, col. 7, ll. 24-28. In other words, a virtual gate is a device that facilitates communications between a self-configuring wireless network and a separate external network, such as the internet. *See* ‘981 Patent, col. 5, ll. 62-65. The virtual gate, therefore, is a link between a wireless network cluster and another computer

¹ Bluetooth is a wireless technology that allows for two way wireless data exchanges using radio frequencies over short distances. Essentially, Bluetooth is a technology that allows Bluetooth enabled devices to communicate with each other. Although Bluetooth is most widely known as the technology used to connect mobile telephones and wireless headsets, it is now used in a wide variety of technologies, including wireless networking between personal computers and printers, GPS receivers, bar code scanners, video game controllers, home theatre equipment, and medical devices.

network.

The “virtual network operations entity” or “VNOC”² is described in the ‘981 Patent as “a universal communications adapter that is enabled to transmit and receive using a variety of communications protocols and media.” ‘981 Patent, col. 8, ll. 63-67. The VNOC is capable of communicating directly with individual virtual nodes in the network cluster as well as with the virtual gate. Furthermore, the VNOC is capable of communicating using a variety of communication platforms, such as Bluetooth, radio frequency, cellular, microwave, and satellite.

Claim 1 of the ‘981 Patent is the only asserted independent claim³ and incorporates the three main components discussed *supra*. Claim 1 provides:

1. A self-configuring wireless network, comprising:

(I) a network cluster, comprising:

(a) a first network including a plurality of self-configuring, individually addressable virtual nodes in which individual virtual nodes are independently operative to

(i) initiate and establish a wireless communication connection with any other self-configuring virtual node associated with the first network during a self-configuration process,

(ii) store information regarding the identities and/or location of other self-configuring virtual nodes with which the node has established a communication connection,

² The term “virtual network operations entity” is not found in the descriptive sections of the ‘981 Patent Specification. Rather, the Specification refers to a “virtual network operations *center*” (emphasis added). The parties agree that these terms are equivalent, and refer to the same entity.

³ According to the glossary of the United States Patent and Trademark Office, an independent claim is one “that does not refer back to or depend on another claim.” In short, an independent claim stands on its own.

(iii) generate data and transmit the data to other virtual nodes with which the node has established a communication connection, and

(iv) receive data from virtual nodes and forward the data to other virtual nodes with which the node has established a communication connection;

(b) a second network including a plurality of self-configuring, individually addressable virtual nodes in which individual virtual nodes are independently enabled with the capabilities to

. . . [identical to I(a)(i)-(v)] . . .

(c) wherein the first network communicates with the second network via a wireless communication connection between at least one virtual node associated with the first network and at least one virtual node associated with the second network;

(II) a virtual gate being communicatively coupled to the first and/or second network and configured to provide a communication access point between the network cluster and at least one external network; and

(III) a virtual network operations entity configured to facilitate communications between the network cluster, and at the least one external network.

‘981 Patent, col. 17, ll. 1-47.

ANALYSIS

A. Construction of Disputed Claim Phrases

Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 389-90 (1996). “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks and citation omitted). In interpreting a claim, a court should look first to the intrinsic evidence, *i.e.*, the patent itself, including the claims and the rest of the specification, and if in evidence, the prosecution history. *Vitrionics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citation omitted).

Although it is within the sound discretion of a court to use extrinsic evidence as an aid in construing a claim, extrinsic evidence is “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1319.

A claim term should be construed to mean “what one of ordinary skill in the art at the time of the invention would have understood the term to mean.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 986 (Fed. Cir. 1995) (en banc) *aff’d*, 517 U.S. 370 (1996). “Importantly, 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.” *Phillips*, 415 F.3d at 1313. Thus, the specification is “always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* at 1315 (quoting *Vitrionics*, 90 F.3d at 1582) (internal quotation mark omitted). However, courts should not make the mistake of “reading a limitation from the written description into the claims.” *Id.* at 1320. The Federal Circuit has “repeatedly warned against confining the claims” to the embodiments described in the specification. *Id.* at 1323.

Although the disputed claim terms were construed by this Court at the *Markman* hearing on October 1, 2010, those constructions are set forth below.

1. Construction of “self-configuring . . . [virtual nodes]”

For reasons stated on the record during the *Markman* hearing, this Court construes “self-configuring” to mean “one or more virtual nodes, each of which is independently capable of creating routes connecting that node to a virtual gate and storing such routes.” This phrase is found in all 23 claims of the ‘981 Patent.

2. Construction of “self-configuration process”

The Plaintiff and Defendant agree that the interpretation of “self-configuration process” is dependent on the interpretation of “self-configuring.” Accordingly, and for reasons stated on the record during the *Markman* hearing, this Court construes “self-configuration process” to mean “a process by which a virtual node creates routes connecting that node to a virtual gate and stores such routes.” This phrase is found in claims 1, 2, and 3 of the ‘981 Patent.

3. Construction of “network cluster”

For reasons stated on the record during the *Markman* hearing, this Court construes “network cluster” to mean “at least two networks daisy-chained together where each network contains at least two virtual nodes.” This phrase is found in claims 1, 11, and 18 of the ‘981 Patent.

4. Construction of “virtual node(s)”

For reasons stated on the record during the *Markman* hearing, this Court construes “virtual node(s)” to mean “individually addressable entities, which can be originators, recipients or routers of data, that are enabled for wireless communication and can form ad hoc connections with other devices to wirelessly link the devices together.” This phrase is found in claims 1-6, 10, and 19 of the ‘981 Patent.

5. Construction of “first network”

For reasons stated on the record during the *Markman* hearing, this Court construes “first network” to mean “a first collection of multiple virtual nodes that are configured into a network separate from the ‘second network.’” This phrase is found in claims 1-3 of the ‘981 Patent.

6. Construction of “second network”

For reasons stated on the record during the *Markman* hearing, this Court construes “second network” to mean “a second collection of multiple virtual nodes that are configured into a network separate from the ‘first network.’” This phrase is found in claims 1-3 of the ‘981 Patent.

7. Construction of “independently operative to” / “independently enabled with the capabilities to”

For reasons stated on the record during the *Markman* hearing, this Court construes “independently operative to” / “independently enabled with the capabilities to” to mean “capable of performing the recited steps without intervention or control by any other component or entity.” These phrases are found in claim 1 of the ‘981 Patent.

8. Construction of “wireless communication connection” / “communication connection”

For reasons stated on the record during the *Markman* hearing, this Court construes “wireless communication connection” / “communication connection” to mean “a wireless connection over which data may be transmitted and received” These phrases are found in claims 1 and 4-6 of the ‘981 Patent.

9. Construction of “initiate and establish a wireless communication connection with any other self-configuring virtual node”

For reasons stated on the record during the *Markman* hearing, this Court determined that the phrase “initiate and establish a wireless communication connection with any other self-configuring virtual node” requires no construction. This phrase is found in claim 1 of the ‘981 Patent.

10. Construction of “store information regarding the identities and/or location”

For reasons stated on the record during the *Markman* hearing, this Court determined that the phrase “store information regarding the identities and/or location” requires no construction. This phrase is found in claim 1 of the ‘981 Patent.

11. Construction of “with which the node has established a communication connection”

For reasons stated on the record during the *Markman* hearing, this Court construes “with which the node has established a communication connection” to mean “with which the node has established a wireless connection over which data may be transmitted and received.” This phrase is found in claim 1 of the ‘981 Patent.

12. Construction of “data”

For reasons stated on the record during the *Markman* hearing, this Court determined that the term “data” requires no construction. This term is found in claim 1 of the ‘981 Patent.

13. Construction of “generate data”

For reasons stated on the record during the *Markman* hearing, this Court determined that the phrase “generate data” requires no construction. This phrase is found in claim 1 of the ‘981 Patent.

14. Construction of “forward the data”

For reasons stated on the record during the *Markman* hearing, this Court determined that the phrase “forward the data” requires no construction. This phrase is found in claim 1 of the ‘981 Patent.

15. Construction of “communicatively coupled to”

For reasons stated on the record during the *Markman* hearing, this Court construes “communicatively coupled to” to mean “a connection that results in communication.” This phrase is found in claim 1 of the ‘981 Patent.

16. Construction of “communication access point”

For reasons stated on the record during the *Markman* hearing, this Court construes “communication access point” to mean “a connection between two networks.” This phrase is found in claim 1 of the ‘981 Patent.

17. Construction of “virtual network operations entity configured to facilitate communications”

For reasons stated on the record during the *Markman* hearing, this Court construes “virtual network operations entity configured to facilitate communications” to mean “an entity implementing a universal communication adapter that transmits and receives data using a variety of communication protocols and media, and translates inbound data from one format or medium to another.” This phrase is found in claims 1 and 11-18 of the ‘981 Patent.

18. Construction of “routing table”

For reasons stated on the record during the *Markman* hearing, this Court construes “routing table” to mean “a table containing routing information about two separate groups of entities: (1) virtual gate, and (2) virtual nodes that have confirmed a route for data to be transmitted to the virtual gate.” This phrase is found in claim 4 of the ‘981 Patent.

19. Construction of “poll”

For reasons stated on the record during the *Markman* hearing, this Court determined that the term “poll” requires no construction. This phrase is found in claim 5 of the ‘981 Patent.

20. Construction of “messaging information”

For reasons stated on the record during the *Markman* hearing, this Court construes “messaging information” to mean “information indicating whether a particular node is still

capable of communicating with the other nodes in a network.” This phrase is found in claim 5 of the ‘981 Patent.

21. Construction of “computer network gateway”

For reasons stated on the record during the *Markman* hearing, this Court construes “computer network gateway” to mean “a device logically located between the network cluster and the external network, which enables virtual nodes in the network cluster to communicate with a network to transmit data or receive commands.” This phrase is found in claim 7 of the ‘981 Patent.

22. Construction of “pre-specified events”

For reasons stated on the record during the *Markman* hearing, this Court construes “pre-specified events” to mean “pre-selected occurrences, or the lack of an occurrence, for which the customer desires to be notified.” This phrase is found in claims 11 and 18 of the ‘981 Patent.

23. Construction of “virtual gate”

For reasons stated on the record during the *Markman* hearing, this Court construes “virtual gate” to mean “a logical gateway that enables communications between a virtual node and an external network.” This phrase is found in claims 1, 7, and 10 of the ‘981 Patent.

24. Construction of “external network”

For reasons stated on the record during the *Markman* hearing, this Court construes “external network” to mean “a network separate from the network cluster.” This phrase is found in claims 1, 8, 9, 11, and 13 of the ‘981 Patent.

B. Motion for Summary Judgment—Indefiniteness

The question of claim indefiniteness “is a legal conclusion that is drawn from the court’s duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d

1342, 1347 (Fed. Cir. 2005) (citation omitted). Patent limitations serve to delineate the scope of a particular invention with sufficient definiteness “to inform the public of the bounds of the protected inventions.” *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). Indeed, the Supreme Court of the United States has stated:

The limits of a patent must be known for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public. Otherwise, a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field, and [t]he public [would] be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights.

Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996) (internal citations and quotation marks omitted). Consequently, the Patent Act requires that the patent’s claims “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention. 35 U.S.C. § 112 ¶ 2.

In assessing the definiteness requirement, a court “must determine whether those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Bancorp Servs., LLC v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1371 (Fed. Cir. 2004). If a claim is not amenable to construction, it is indefinite and invalid as a matter of law. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). However, because patents are presumed valid, *see* 35 U.S.C. § 282, a court should find a claim indefinite “only if reasonable efforts at claim construction prove futile.” *Exxon Research*, 265 F.3d at 1375. In other words, a claim is not indefinite solely because claim construction of the disputed claims would be difficult. *Bancorp Servs.*, 359 F.3d at 1371. Instead, a party must show, by clear and convincing evidence, that a claim is not amenable to construction or is “insolubly ambiguous” and one

skilled in the art would not understand the scope of the claim when read in light of the specification. *Id.*; *Datamize*, 417 F.3d at 1347-48. If the claim’s meaning is discernable, “even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree,” the claim is “sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon Research*, 265 F.3d at 1375. Finally, it should be noted that “close questions of indefiniteness . . . are properly resolved in favor of the patentee.” *Id.* at 1380.

The summary judgment standard is the same in a patent case as in any other case. *See Union Carbide Corp. v. Am. Can Co.*, 724 F.2d 1567, 1571 (Fed. Cir. 1984). Like claim construction, the question of whether a claim is indefinite is a legal conclusion that is “drawn from the court’s duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005). As a result, patent claim indefiniteness is a question of law that is appropriately resolved at the summary judgment stage.

Rule 56 of the Federal Rules of Civil Procedure provides that summary judgment “shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.” Fed. R. Civ. P. 56(c). A material fact is one that “might affect the outcome of the suit under the governing law.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A genuine issue over a material fact exists “if the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Id.* In considering a motion for summary judgment, a judge’s function is limited to determining whether sufficient evidence exists on a claimed factual dispute to warrant submission of the matter to a jury for resolution at trial. *Id.* at 249.

In undertaking this inquiry, a court must consider the facts and all reasonable inferences

in the light most favorable to the nonmoving party. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986). After the moving party has established the absence of a genuine issue of material fact, the nonmoving party must present evidence in the record demonstrating an issue of fact to be resolved at trial. *Pension Ben. Guar. Corp. v. Beverley*, 404 F.3d 243, 246-47 (4th Cir. 2005) (citing *Pine Ridge Coal Co. v. Local 8377, UMW*, 187 F.3d 415, 422 (4th Cir. 1999)). Summary judgment will be granted if the nonmoving party “fails to make a showing sufficient to establish the existence of an element essential to that party’s case, and on which that party will bear the burden of proof at trial.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

Defendants have moved for summary judgment on the ground that certain claims of the ‘981 Patent are invalid for indefiniteness. Specifically, Defendants contend that every claim in the ‘981 Patent is invalid for indefiniteness because each claim is defined in terms of virtual nodes that are “associated with” either a “first network” or a “second network” and nothing in the intrinsic record of the patent provides guidance regarding what the term “associated with” means. Defs.’ Resp. Cl. Construction Br. at p. 1. In addition, Defendants claim that several dependent claims in the ‘981 Patent are indefinite for another reason—that is, they contain references to certain “modules” that Defendants argue should properly be construed as means-plus-function limitations under 35 U.S.C. § 112 ¶ 6 and would thereby be indefinite because they fail to disclose any corresponding structure. *Id.* at 16-20. Each of these arguments will be addressed in turn.

1. “Associated with”

The asserted claims of the ‘981 Patent are directed towards methods and devices involving self-configuring wireless communication enabled virtual nodes and networks. Claim 1

of the '981 Patent describes virtual nodes that are “associated with” either a “first network” or a “second network.” Specifically, Claim 1 describes the process by which the first network communicates with the second network: “wherein the first network communicates with the second network via a wireless communication connection between at least [one] virtual node *associated with* the first network and at least one virtual node *associated with* the second network.” ‘981 Patent, col. 17, ll. 36-40 (emphasis added). Mesh Comm proposes that the term “associated with” be given its plain and ordinary meaning, albeit without describing what that plain and ordinary meaning is. Defendants contend that the term “associated with” is indefinite because nothing in the ‘981 Patent describes how virtual nodes become associated with either the first or second network.

Defendants argue that the phrase “associated with” is indefinite because it has multiple possible meanings to one of ordinary skill in the art. For example, Defendants claim that the phrase can mean “(1) association by a node’s geographic area, (2) association by the node’s network address, or (3) association by the node’s physical wireless transmission parameters such as frequency and modulation type.” Defs.’ Resp. Cl. Construction Br. at p. 12-13. While Defendants are correct in noting that “associated with” *can* have multiple meanings, they are incorrect in arguing that this fact necessitates a finding by this Court that the phrase is indefinite. It is not enough to conclude that a phrase has the potential to be ambiguous—“[i]f the meaning of the claim is discernable, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree,” the claim is not invalid on indefiniteness grounds. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). In light of the presumption of validity, and because this Court can discern a meaning for the phrase “associated with,” Defendants have not met their summary judgment burden.

Even though this Court concludes that “associated with” is not insolubly ambiguous, there is no plain and ordinary meaning that can readily be adopted—therefore, a construction of the phrase is necessary.⁴ The phrase “associated with” appears six times in the ‘981 Patent’s claims. Although the specification provides no explanation of the meaning of “associated with,”⁵ it is clear from the ‘981 Patent’s claims that the phrase relates to individual virtual nodes and their interactions with other virtual nodes in their same networks as well as virtual nodes in separate networks. Every usage to the phrase “associated with” in the ‘981 patent claims refers to virtual nodes that are associated with either the first network or virtual nodes associated with the second network. *See* ‘981 Patent, col. 17, ll. 9, 25, 38-40, 57, 62. Perhaps the most illuminating use of the phrase “associated with” appears in Claim 3 of the ‘981 Patent.

Dependant Claim 3 provides:

The self-configuring wireless network of claim 1, wherein in response to a disruption in the first network, at least one of the self-configuring virtual nodes of the first network *establishes connectivity and becomes associated with* the second network during its self-configuration process, and wherein in response to a disruption in the second network, at least one of the self-configuring virtual nodes of the second network *establishes connectivity and becomes associated with* the first network during its self-configuration process.

‘981 Patent, Col. 17, ll. 53-63.

⁴ Although other courts have found that the phrase “associated with” requires no construction, *see, e.g., Stanacard, LLC v. Rebtel Networks, AB*, 680 F. Supp. 2d 483, 494-95 (S.D.N.Y. 2010), the context in which the phrase is used in the ‘981 Patent does not lend the phrase a readily available plain and ordinary meaning. In *Stanacard*, the patent at issue used the phrase “associated with” in describing how a recipient of a telephone call is associated with a particular telephone number. *Id.* The court determined only that for a telephone number to be associated with a recipient, the number did not need to be “preprogrammed by the caller to correlate to.” *Id.* This Court concludes that although a lay jury may be able to understand a plain and ordinary meaning of the phrase “associated with” in the context of a patent describing a method and apparatus for making telephone calls—something most jurors are undoubtedly familiar with—a construction of the phrase in the context of a patent describing a wireless communication enabled meter and network requires a construction beyond the plain and ordinary meaning.

⁵ The term “associated with” appears once in the specification, but the phrase is used in a different context from the usage in the claims. *See* ‘981 Patent at 14:11-13 (“Reports and services associated with an event may be collectively considered as transactions.”).

Neither Mesh Comm, nor Defendants make any reference to this claim in their respective claim construction and summary judgment papers. Nevertheless, it is clear that a virtual node becomes associated with a network only after establishing connectivity to that network. This Court previously construed the term “communication connection” to mean “a wireless connection over which data may be transmitted and received.” Moreover, this Court construed “virtual node(s)” to mean “individually addressable entities, which can be originators, recipients or routers of data, that are enabled for wireless communication and can form ad hoc connections with other devices to wirelessly link the devices together.” Therefore, a virtual node becomes associated with the first network after establishing a wireless connection with a virtual node in the first network. Similarly, a virtual node becomes associated with the second network after establishing a wireless connection with a virtual node in the second network. In this regard, it is possible for a virtual node to be associated with both the first and second networks—indeed, the ‘981 Patent contemplates such a scenario: “wherein the first network communicates with the second network via a wireless communication connection between at least [one] virtual node associated with the first network and at least one virtual node associated with the second network.” ‘981 Patent, col. 17 ll. 36-40. In other words, there is a wireless communication connection between a first network virtual node and a second network virtual node, and those two nodes are thereby associated with each network because they have established a wireless connection with a node in the other network. This is not to say that those virtual nodes are members of both networks—“associated with” does not connote “membership in” and this Court’s construction of “associated with” should not be so interpreted.

Accordingly, this Court finds that “associated with” is not “insolubly ambiguous,” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005), and is therefore construed to mean “wirelessly connected to.”

2. The “Module” Limitations

The term “module” is used in Claims 11-18 of the ‘981 Patent. For example, Claim 11 recites in relevant part:

The self-configuring wireless network of claim 1, wherein the virtual network operations entity comprises . . .
 an *event naming module* configured to identify pre-specified events; . . .
 an *event management module* configured to process and manage occurrences or the pre-specified events; and
 a *communication management module* configured to manage communication of the pre-specified events between the network cluster and the at least one external network.

‘981 Patent, col. 18, ll. 31-46 (emphasis added). The parties dispute whether the module limitations found in the ‘981 Patent’s Claims should be treated as “means plus function” limitations subject to 35 U.S.C. § 112 ¶ 6. Specifically, Defendants argue that each “module” term in the ‘981 Patent should be construed as a means plus function limitation subject to § 112 ¶ 6, and Mesh Comm argues that the “module” terms should not be construed as means plus function claims. As expressed in the statute:

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

35 U.S.C. § 112 ¶ 6. A claim limitation that does not include the word “means” triggers a rebuttable presumption that § 112 ¶ 6 does not apply. *See CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002). “However, a limitation lacking the term ‘means’ may overcome the presumption against means-plus-function treatment if it is shown that the claim

term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *MIT v. Abacus Software*, 462 F.3d 1344, 1353 (Fed. Cir. 2006) (internal quotation marks and citations omitted). The United States Court of Appeals for the Federal Circuit has noted that:

In considering whether a claim term recites sufficient structure to avoid application of section 112 ¶ 6, we have not required the claim term to denote a specific structure. Instead, we have held that it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.

Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1359-60 (Fed. Cir. 2004) (citing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)).

In the present case, the “module” terms included in the ‘981 Patent would be readily understood by a person of skill in the art based on the functions to be performed. Each reference to a “module” refers to a subpart or component of the virtual network operations entity, which is itself a discrete entity. For example, Claims 11 through 18 of the ‘981 Patent describe the virtual network operations entity, and make clear that it comprises, among other things, an event naming module, an event management module, a communication management module, a configuration management module, a security management module, an error and recovery management module, a replication redundancy management module, a billing module, an audit and logging module, and a publication and subscription management module. ‘981 Patent, col. 18, ll. 31-67, and col. 19, ll. 1-11. Moreover, the Specification of the ‘981 Patent describes the modules as components of the virtual network operations entity. Specifically, Figure 12 is a schematic representation of the internal structure of the VNOC, and depicts several of the modules as internal components of the VNOC. *See* ‘981 Patent, Fig. 12, and col. 14, ll. 18-55.

In arguing that the module limitations should be treated as means plus function limitations subject to § 112 ¶ 6, Defendants rely primarily on *Kozam v. Phase Forward, Inc.*, No. MJG-04-1787, 2005 WL 6218037, (D. Md. Aug. 29, 2005) (Garbis, J.). In that case, Judge Garbis of this Court found that the term “module” should be treated as a means plus function limitation because the terms “first verification module” and “second verification module” conveyed no structural meaning beyond the recitation of the functions. *See id.* at *6. The *Kozam* court noted that the word “module” is “well known in the art as a software component,” but determined that the module references in the particular patent referred to components of a larger software program and failed to describe any meaningful structure. *Id.* Therefore, the court concluded that the limitations containing the word “module” should be treated as means plus function limitations subject to § 112 ¶ 6. *Id.* at *6-7.

Unlike the module limitations in *Kozam*, the module limitations in the present case do describe meaningful structure, and this fact takes those claims out of the ambit of § 112 ¶ 6. As previously mentioned, every module limitation in the ‘981 Patent refers to a subpart or component of the virtual network operations entity—they are defined components of a larger entity, which is itself defined. As such, the ‘981 Patent’s module references would convey to a person skilled in the art the requisite structure for performing the claimed functions, and the module limitations of the ‘981 Patent should not be treated as means plus function limitations.

CONCLUSION

For the reasons stated above, Defendants PEPCO and SSN’s Motion for Summary Judgment (ECF No. 62) is DENIED, and the disputed claim terms are given the definitions set forth in this Memorandum Opinion.

A separate Order follows.

Dated: December 29, 2010

/s/ _____
Richard D. Bennett
United States District Judge