

IN THE UNITED STATES DISTRICT COURT
DISTRICT OF UTAH

VIVINT, INC., <p style="text-align:right">Plaintiff,</p> <p style="text-align:center">v.</p> ALARM.COM INC., <p style="text-align:right">Defendant.</p>	MEMORANDUM DECISION AND ORDER CONSTRUING CLAIMS AND DENYING ALARM.COM'S MOTION FOR PARTIAL SUMMARY JUDGMENT Case No. 2:15-cv-392 District Judge Clark Waddoups
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Before the court are the parties' cross-motions for claim construction (*See* ECF No. 168), and Alarm.com's Motion for Partial Summary Judgment of Invalidity. (ECF No. 174.) As explained below, the court DENIES Alarm.com's Motion for Partial Summary Judgment of Invalidity and GRANTS in part and DENIES in part the parties' cross-motions for claim construction. Because the construction of one term depends on the court's ruling on the Motion for Summary Judgment, the court first addresses that motion.

Summary Judgment

In its Motion for Summary Judgment, Alarm.com requested that the court "grant partial summary judgment against" Vivint "on claims 8 and 12" of Patent 6,717,513 (the '513 Patent) and "claims 17, 18, 22, 25, and 28" of Patent 6,462,654 (the '654 Patent) "on the ground[] they are invalid under 35 U.S.C. § 112 for indefiniteness." (ECF No. 174 at 5.) Because claims 8 and 12 of the '513 Patent are currently stayed, (*See* ECF No. 303 at 2; ECF No. 317) the court only addresses the parties' arguments relating to the '654 Patent. The claim term at issue for the '654 Patent is "message generating mechanism."

Relevant Background

On November 6, 2015, Alarm.com petitioned the PTO for inter-partes review (IPR) of claims 1–28 of the '654 Patent. (*See* ECF No. 204-1 at 2.) Alarm.com argued that the term “message generating mechanism” “should be treated as a means-plus function claim term because it is a purely functional recitation and does not recite definite structure” (ECF No. 204-1 at 15.) The PTAB instituted review of several claims of the '654 patent, including those claims presently at issue. (*See* ECF No. 196 at 137 (“On May 12, 2016, we issued a Decision granting institution of *inter partes* review only as to claims 9, 10, 14, 17, 18, 22, and 22–25.”).)

The PTAB noted that Alarm.com, in its petition, had “contend[ed] that the term ‘message generating mechanism,’ . . . should be treated as a means-plus function term under 35 U.S.C. § 112 ¶ 6.” (ECF No. 196 at 345.) The PTAB further noted that Alarm.com had “contend[ed] that the ‘message generating mechanism’ recited in each of the challenged independent claims ‘is a purely functional recitation and does not recite definite structure’ and noted that Alarm.com argued “that ‘the use of the word ‘mechanism’ in the absence of any actual structural recitation compels treatment under 35 U.S.C. § 112 ¶ 6.”” (ECF No. 196 at 347 (citations omitted)).

The PTAB also addressed Vivint’s arguments. It noted that Vivint had “contend[ed] that a person of ordinary skill in the art, reading the claims as a whole, ‘would have understood that the claims recite sufficiently definite meaning as to the structure of the term.’” (ECF No. 196 at 347.) Vivint further argued that “under the broadest reasonable interpretation, ‘message generating mechanism’ means ‘a processor, a multiplexer, and a radio, wherein the processor executes an algorithm that generates a message that at least includes an indication of the equipment to which the message relates.’” (ECF No. 196 at 348.)

The PTAB “agree[d] with [Vivint] that the term ‘message generating mechanism’ is not a means-plus function limitation and is not subject to construction under 35 U.S.C. § 112 ¶ 6.” The PTAB noted that “[e]ach of independent claims 17, 25, 27, and 28 . . . recites ‘an interface unit . . . said interface unit having a message generating mechanism.’” (ECF No. 196 at 348.) The PTAB provided, in relevant part:

[i]t is clear from the plain language of each of the challenged independent claims . . . that the recited message generating mechanism is **part of the recited interface unit** and is not merely a recitation of function without corresponding structure. As Patent Owner points out, each of the challenged independent claims also recited a structural relationship between the message generating mechanism and other structural elements, including sensors, remote equipment, and servers, in addition to the interface units. Because we determine that the ordinary meaning of this term as a message generating component of the recited interface unit is clear, however, we conclude that it is unnecessary to provide any further construction of message generating mechanism at this stage of the proceeding. Although, as both Petitioner and Patent Owner point out, the Specification of the ’654 patent states that “CPU 804, multiplexer 805, and radio 801 make up the message generating mechanism of interface unit 10,” . . . we disagree with the parties that, on this record, the broadest reasonable interpretation of the term message generating mechanism necessarily requires each of a processor, a multiplexer, and a radio.

(ECF No. 196 at 348–49 (bold added).)

In its reply to Vivint’s response to the PTAB’s institution decision, Alarm.com again argued that “[t]he ’654 Patent’s ‘message generating mechanism’ is a means-plus function claim term.” (ECF No. 204-2 at 8.) Alarm.com argued “that the ‘message generating mechanism’ is a ‘part of the recited interface unit’ does not give structure to the message generating mechanism. The Federal Circuit has considered this issue before, holding that a ‘compliance mechanism’ is not understood to connote structure, even if its structural relationship to other claim terms is clear.” (ECF No. 204-2 at 10 (citing *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1373 (Fed. Cir. 2015)).

In its final written decision, the PTAB again addressed the parties' arguments regarding whether "message generating mechanism" is a means-plus function. (*See* ECF No. 196 at 149.) The PTAB noted that, while Vivint agreed with the PTAB's ultimate conclusion that the term was not a means-plus function, it disagreed as to the reason why. Vivint appears to have argued that the '654 patent *specification* describes the term with structural significance. (*See* ECF No. 196 at 149–150 ("According to Vivint, 'here, acting as its own lexicographer, the patentee set forth the meaning of 'message generating mechanism' with clarity and deliberateness, using a definitional syntax: '[central processing unit ('CPU')] 804, multiplexer 805, and radio 801 make up the message generating mechanism of interface unit 10.'"). The PTAB also noted that Alarm.com had "reviv[ed] its argument from the Petition that 'message generating mechanism' is a means-plus-function limitation." (ECF No. 196 at 150.)

The PTAB did provide, "[i]n view of the full record developed during trial," that it "remain[ed] unpersuaded by Alarm.com's contention that 'message generating mechanism' is a means-plus-function limitation, as well as by Vivint's argument that the patentees of the '654 patent set forth a limiting definition of that term 'with clarity and deliberateness, using a definitional syntax' in the Specification." (ECF No. 196 at 150.) But the PTAB ultimately concluded that none of the asserted grounds of unpatentability depended on how the term was construed.¹

Alarm.com's Expert

Alarm.com retained Dr. Vernon Thomas Rhyne to consider the '654 Patent, among other patents. (*See* ECF No. 180 at 720.) In his Declaration, Dr. Rhyne opined that "the limitations

¹ (*See* ECF No. 196 at 150–51 ("Moreover, notwithstanding the parties' arguments regarding construction of this term, neither Vivint in its Patent Owner Response nor Alarm.com in its Reply advances any arguments with respect to the asserted grounds of unpatentability that meaningfully depend on their proposed constructions . . . and we discern no need to provide any express construction of the term.").)

containing” the term “message generating mechanism” “are written in means-plus-function form.” (ECF No. 180 at 741.) He further provided that he understood “that the term ‘mechanism’ does not denote any particular structure and that a limitation phrased as a ‘mechanism for’ may be subject to 35 U.S.C. § 112, ¶ 6.” (ECF No. 180 at 742.) He further provided that it was his “opinion that the term ‘message generating mechanism’ does not have any special meaning to a PHOSITA, nor is it the name of any particular structure.” (ECF No. 180 at 742.) It was his “further opinion that nothing in the claims conveys the structure of the . . . ‘message generating mechanism.’” (ECF No. 180 at 742.) For these reasons, he concluded that the term “message generating mechanism” “should be construed under 35 U.S.C. § 112, ¶ 6.” (ECF No. 180 at 742.)

At his deposition, Dr. Rhyne stated that apart from those portions of the declaration discussed immediately above, he did not provide any other analysis regarding whether the term “message generating mechanism” should be treated under 35 U.S.C. § 112, ¶ 6:

Q. “Aside from statements about the law, the sum total of your analysis about whether the message generating mechanism should be treated under Section 112, Paragraph 6, is contained in Paragraph 68 to 70 of your declaration, true?”

A. “And I think principally in Paragraph 69. Nothing in the relevant claims conveys the structure of those two elements.”

Q. “Anything else in your declaration?”

A. “The declaration speaks for itself, but I don’t recall anything else to point you to.”

(ECF No. 196 at 485, Rhyne Depo. 103:9–20.)

Vivint’s Expert

Vivint retained Joseph C. McAlexander to review the ’654 Patent, among other patents. (See ECF No. 196 at 532.) Relevant here, Mr. McAlexander opined that “[a]t the time of the invention, a POSITA would not have understood “message generating mechanism” as means-plus-function.” (ECF No. 196 at 550.) This is so, according to Mr. McAlexander, because a

“POSITA would understand” “message generating mechanism” “as structure,” “by describing it as part of the interface unit, which is itself a structure in the claimed system.” (ECF No. 196 at 549–550.)

At Mr. McAlexander’s deposition, the following line of questioning occurred:

Q. “The word mechanism by itself does not evoke a particular device, correct?”

A. “The word mechanism, by itself in a vacuum, apart from the claim, just in a vacuum, does not specify a particular type of device.”

(ECF No. 217-1 at 17, McAlexander Depo. 58:9–16.)

Undisputed Facts

1. Independent claim 17 of the ’654 Patent recites, in relevant part, “[a] system for monitoring remote equipment, comprising an interface unit, locally connected to at least one piece of remote equipment, said interface unit having a message generating mechanism for periodically sending a normal status message if said interface unit is functioning properly” (ECF No. 175 at 50; ’654 Patent, claim 17, JA-49 at 18:40–46.)
2. Claims 18 and 22 depend from claim 17. (ECF No. 174 at 6; ECF No. 203 at 8.)
3. Independent claim 25 of the ’654 Patent recites, in relevant part:

“[a] system for monitoring remote equipment, comprising: a sensor in local communication with a piece of remote equipment, said sensor detecting a state of at least one parameter of the piece of remote equipment; an interface unit, locally connected to said sensor, said interface unit having a message generating mechanism for periodically sending a normal status message if the piece of remote equipment is functioning properly; and a computer server in remote communication with said interface unit, said server adapted to receive said normal status messages generated by said interface unit, said computer server having a user interface, a user being capable of remotely accessing said computer server via said interface to remotely configure a user-defined message profile containing outgoing message routing instructions

(ECF No. 175 at 50; ’654 Patent, claim 25, JA-50 at 25:50–03.)

4. Independent claim 28 of the '654 Patent recites, in relevant part:

“[a] system for remotely monitoring equipment having at least one built-in sensor which detects a state of at least one parameter of the equipment, comprising: an interface unit, locally connected to the equipment and in communication with the built-in sensor, said interface unit having a message generating mechanism for periodically sending a normal status message if the equipment and/or said interface unit are functioning properly; and a computer server in remote communication with said interface unit, said server adapted to receive said normal status messages generated by said interface unit, said computer server having a user interface, a user being capable of remotely accessing said computer server via said user interface to remotely configure a user-defined message profile containing outgoing message routing instructions

(ECF No. 175 at 51; '654 Patent, claim 28, JA-50 at 28:39–56.)

5. The specifications of the '654 Patent disclose the following:

- a. “[t]ogether, CPU 804, multiplexer 805, and radio 801 make up the message generating mechanism of interface unit 10;”
- b. the CPU is “connected to a multiplexer 805 that is used to steer the flow of serial data . . . to the transport radio module 801;”
- c. “[o]nce every 24 hours, the CPU assembles a packet (heartbeat) of data [containing] status and operational data of connected monitored equipment and communicates this packet of data to the transport radio module 801”, which the radio “then transmits . . . to the remote server as a normal status message; ”
- d. sensor monitoring signals “can cause the CPU 804 to assemble an exception message packet and pass it on to the transport radio 801 for delivery to the remote server.” (ECF No. 174 at 6; ECF No. 203 at 8.)

6. Figure 16 of the patent depicts the CPU, multiplexer, and radio module:

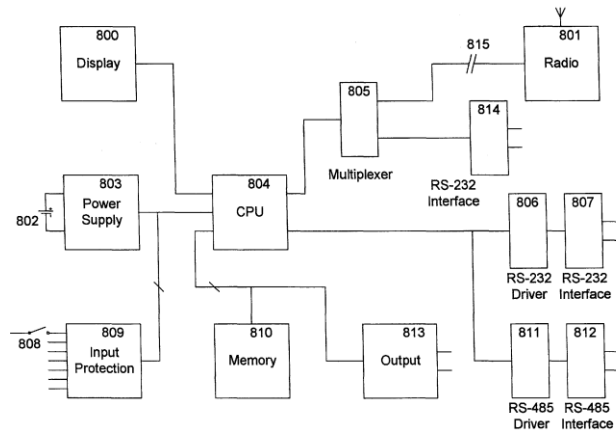


Figure 16

Analysis

“A patent must ‘conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as the invention.’” *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1371 (Fed. Cir. 2015) (quoting 35 U.S.C. § 112, ¶ 2 (2006)).² “A claim fails to satisfy this statutory requirement and is thus invalid for indefiniteness if its language, when read in light of the specification and the prosecution history, ‘fails to inform, with reasonable certainty, those skilled in the art about the scope of the invention.’” *Id.* (quoting *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014)).

“Section 112, ¶ 6 . . . allows a patentee to express a claim limitation as ‘a means or step for performing a specified function without the recital of structure, material, or acts in support thereof,’ and the section provides that claim limitations expressed in this manner ‘shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.’” *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1097 (Fed. Cir. 2014).

² Paragraph 2 and Paragraph 6 of 35 U.S.C. § 112 were replaced by § 112(b) and § 112(f) respectively when the Leahy–Smith America Invents Act (“AIA”), Pub.L. No. 112–29, 125 Stat. 284 (2011) took effect on September 16, 2012. Because the application resulting in the asserted patent was filed before that date, the court refers to the pre-AIA version of § 112.

“To determine whether a purportedly means-plus-function term is indefinite, the court employs a two-step process.” *Quanergy Sys., Inc. v. Velodyne Lidar, Inc.*, No. 16-CV-05251-EJD, 2017 WL 4410174, at *4 (N.D. Cal. Oct. 4, 2017).

“First, the court determines whether the term-in-question is a means-plus-function term.” *Id.* “[W]here the claim language does not recite the term ‘means,’ [the court] presume[s] that the limitation does not invoke § 112, ¶ 6.” *Robert Bosch*, 769 F.3d at 1097. But “‘if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function,’ this presumption may be rebutted.” *Advanced Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1347 (Fed. Cir. 2016) (citation omitted). “‘The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.’” *Id.* (citation omitted). “In determining whether this presumption has been rebutted, the challenger must establish by a preponderance of the evidence that the claims are to be governed by § 112, ¶ 6.” *Id.*

Once a court determines that a claim term is a means-plus-function term, the court turns to the second step: determining “whether the specification discloses sufficient structure that corresponds to the claimed function.” *Williamson*, 792 F.3d at 1351. “This, in turn, is a two-step process:” *Quanergy Sys.*, 2017 WL 4410174 at *4.

The court must first identify the claimed function. Then, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function. Where there are multiple claimed functions . . . the patentee must disclose adequate corresponding structure to perform all of the claimed functions. If the patentee fails to disclose adequate corresponding structure, the claim is indefinite.

Williamson, 792 F.3d at 1351–52. “When a defendant challenges a means-plus-function term as indefinite, indefiniteness must be proven by ‘clear and convincing evidence.’” *Quanergy Sys.*,

2017 WL 4410174 at *4 (quoting *Microsoft Corp. v. i4i Ltd. Partnership*, 564 U.S. 91, 102, (2011)). But, again, in determining whether the presumption based on the lack of the word “means” “has been rebutted, the challenger must [only] establish by a preponderance of the evidence that the claims are to be governed by § 112, ¶ 6.” *Advanced Ground*, 830 F.3d at 1347.

As explained below, the court need not proceed to the second step because Alarm.com has not met its burden of overcoming the presumption that Section 112 ¶ 6 does not apply.

I. Alarm.com Has Not Met Its Burden

The parties dispute whether § 112 ¶ 6 applies to the ’654 claim limitations involving “message generating mechanism.” Alarm.com argues that Section 112 ¶ 6 applies to the term “message generating mechanism” because that term “‘recites function without reciting sufficient structure for performing that function’” (ECF No. 174 at 15 (quoting *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015).) In contrast, Vivint argues that Alarm.com “has neither carried its burden to show that [message generating mechanism] is a means-plus-function limitation nor rebutted applicable presumptions that it is not.” (ECF No. 203 at 8.)

Here, it is undisputed that the claim terms at issue do not contain the word “means.” As discussed above, “the failure to use the word ‘means’ . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). To overcome this presumption, Alarm.com must establish “by a preponderance of the evidence that the claims are to be governed by § 112, ¶ 6.” *Advanced Ground*, 830 F.3d at 1347. To do this, it must demonstrate that a person of ordinary skill in the art would understand the words of the relevant claims to *not* have a sufficiently definite meaning as the name for structure. *See id.*

In its motions for claim construction, Vivint took the position that “message generating mechanism” “is a subcomponent of the ‘interface unit,’ a definite structure” and argued “the claimed ‘interface unit’ recites sufficient structure to one of skill in the art for performing the claimed function.” (ECF No. 172 at 25.) Vivint’s argument echoed the declaration of its expert.

As discussed above, Vivint’s expert submitted a declaration that “a POSITA would not have understood ‘message generating mechanism’ as a means-plus function” because a “POSITA would understand it as structure based on the surrounding claim language.” (ECF No. 196 at 549.) This is so, according to Vivint’s expert, because “each of the independent claims describes the message generating mechanism as structure by describing it *as part of the interface unit, which is itself a structure in the claimed system.*” (ECF No. 196 at 550 (emphases added).) Thus, Vivint’s expert, at least to some extent, took the same position that the PTAB took in its institution decision. (*Compare* ECF No. 196 at 550 *with* ECF No. 196 at 348–349 (“[i]t is clear from the plain language of each of the challenged independent claims . . . that the recited message generating mechanism is part of the recited interface unit and is not merely a recitation of function without corresponding structure.”).)

Vivint’s expert further explained that “[t]he claims . . . convey the structural character of the message generating mechanism by describing how that mechanism is connected to and interacts with other structure.” (ECF No. 196 at 550.) Vivint’s expert gave two examples to illustrate this point. First, he noted that “claim 18 indicates that the mechanism ‘forwards . . . messages to said computer server,’ and that it does so over ‘a cellular telephone network, radio transmissions, telephone lines, or the Internet.’” (ECF No. 196 at 550 (citation omitted).) Second, he noted that “[c]laims 25 and 28 place the message generating mechanism in relation to yet other structures—specifically, sensors and monitored equipment—by claiming a sensor that

‘detects a state’ of a piece of equipment and indicating that the message generating mechanism sends a message if the sensor detects that the equipment is ‘functioning properly.’” (ECF No. 196 at 55.)

In contrast, Alarm.com’s expert submitted a declaration providing that it was his opinion that “the term ‘message generating mechanism’ does not have any special meaning to a PHOSITA, nor is it the name of any particular structure.” (ECF No. 180 at 742.) He also provided that it was his “opinion that nothing in the relevant claims conveys structure of the . . . ‘message generating mechanism.’” (ECF No. 180 at 742.) But Alarm.com’s expert did not address whether a POSITA would have understood “message generating mechanism” as reciting structure based on it being a part of the interface unit.

Alarm.com’s expert’s failure to address the significance of the interface unit is curious given the timing of his submission. Alarm.com’s expert submitted his declaration more than two years after the PTAB’s institution decision.³ Again, in its institution decision, the PTAB expressed its opinion that

[i]t is clear from the plain language of each of the challenged independent claims . . . that the recited message generating mechanism is **part of the recited interface unit** and is not merely a recitation of function without corresponding structure. As Patent Owner points out, **each of the challenged independent claims also recited a structural relationship between the message generating mechanism and other structural elements**, including sensors, remote equipment, and servers, in addition to the interface units.

(ECF No. 196 at 348.) (bold added.)

Vivint argues that Alarm.com’s “[m]otion fails because its expert declaration is too conclusory to satisfy its burden of production.” (ECF No. 203 at 25.) Vivint argues that “[t]he

³ Alarm.com’s expert submitted his declaration on June 6, 2018. (ECF No. 180 at 759.) It appears that the PTAB issued its institution decision on May 12, 2016.

only evidence [Alarm.com] produced to meet its burden is the declaration of Dr. Rhyne—who confirmed in deposition that his complete ‘analysis’ of whether the ’654 patent recites structure” was contained in paragraphs 68–70 of his expert report. (*See* ECF No. 203 at 25.) Vivint argues that Alarm.com’s “failure to provide ‘evidentiary support’ for its contention . . . is dispositive: because [it] ‘failed to carry its burden, . . . the presumption against the application of § 112, ¶ 6 . . . remains un rebutted’ and it would be ‘legal error’ not to ‘give effect to the un rebutted presumption against the application of § 112, ¶ 6.’” (ECF No. 203 at 26 (quoting *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007–08 (Fed. Cir. 2018)).).

In response, Alarm.com argues that it does not, and need not, rely “solely on Dr. Rhyne’s testimony” because it “has demonstrated, based on intrinsic evidence (the claims themselves), that ‘message generating mechanism’ does not recite sufficient structure to avoid § 112 ¶ 6.” (ECF No. 222 at 19.) Alarm.com is correct that in certain circumstances, a party may overcome the presumption against § 112, para. 6’s application solely by reference to intrinsic evidence.

As recently as 2018, the Federal Circuit noted that “none of [its] cases mandate that a party seeking to overcome the presumption against application of § 112, para. 6 can only do so by presenting extrinsic evidence that one of ordinary skill would *fail to* understand that a term connotes a definite structure.” *Diebold Nixdorf, Inc. v. Int’l Trade Comm’n*, 899 F.3d 1291, 1299 (Fed. Cir. 2018) (emphasis in original). The Federal Circuit in *Diebold Nixdorf* held that “in **appropriate cases**, a party advocating that a claim limitation that does not recite the word ‘means’ is subject to § 112, para. 6 can overcome the presumption against its application solely by reference to evidence intrinsic to the patent.” *Diebold Nixdorf*, 899 F.3d at 1299 (bold added). A close examination of *Diebold Nixdorf* is necessary to determine whether this is an “appropriate

case” to allow Alarm.com—as the party bearing the burden to overcome the § 112, para. 6 presumption—to rely solely on intrinsic evidence.

In *Diebold Nixdorf* the alleged infringer, Diebold, appealed the International Trade Commission’s (Commission) determination that claims reciting the term “cheque standby unit” were “not invalid for indefiniteness.” *Diebold Nixdorf*, 899 F.3d at 1294. Diebold argued on appeal to the Federal Circuit that “cheque standby unit” was “a purely functional term that connotes no specific structure and is therefore subject to § 112, para. 6.” *Id.* at 1296. The patent holder, Hyosung, responded by arguing “that Diebold failed to present evidence of its own to rebut the presumption that § 112, para. 6 does not apply to this term.” *Id.* at 1297.⁴

The Federal Circuit acknowledged that because the claim term lacked the word “means,” the presumption applied. *See Diebold Nixdorf*, 899 F.3d at 1297 (“Where, as here, a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates . . .”). But the Federal Circuit ultimately held, based on the intrinsic evidence, that Diebold had overcome that presumption.⁵

In reaching this holding, the Federal Circuit first concluded that Diebold had “shown,” based on the intrinsic evidence, that the claim term “cheque standby unit,” “as understood by one of ordinary skill in the art, both fails to recite sufficiently definite structure and recites a function

⁴ In its Corrected Nonconfidential Principal Brief, Hyosung argued that “Diebold was required to come forward with evidence that ‘cheque standby unit’ is a means-plus-function term” and argued that Diebold “fail[ed] to identify any of its own record evidence regarding ‘whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure,’ . . . the issue on which it bore the burden of proof.” *DIEBOLD NIXDORF, INC., Diebold Self-Service Systems, Appellants, v. INTERNATIONAL TRADE COMMISSION, Appellee, Nautilus Hyosung Inc., Nautilus Hyosung America Inc., Interveners.*, 2018 WL 1230284 (C.A.Fed.) at *28 (citations omitted).

⁵ *See Diebold Nixdorf*, 899 F.3d at 1298 (“Diebold has shown that the term ‘cheque standby unit,’ as understood by one of ordinary skill in the art, both fails to recite sufficiently definite structure and recites a function without reciting sufficient structure for performing that function. Examining the evidence **intrinsic** to the ’235 patent, we observe that the claims do not recite *any* structure, much less ‘sufficiently definite structure,’ for the ‘cheque standby unit’ Rather, the claims describe the term ‘cheque standby unit’ solely in relation to its function and location in the apparatus.”) (bold added)).

without reciting sufficient structure for performing that function.” *Id.* at 1298. “Examining the evidence **intrinsic** to the” relevant patent, the Federal Circuit “observe[d] that the claims do not recite *any* structure” *Id.* (bold added); *see also id.* (“the ’235 patent does not offer any clues as to what such structure might be. Indeed, the written description does not include any examples of what structures or class of structures falls within the definition of a ‘cheque standby unit.’”)).

After concluding that the intrinsic evidence did not recite any structure, the Federal Circuit addressed the patent holder’s expert testimony. *See id.* at 1299. The Commission had credited this expert testimony “in determining that the term ‘cheque standby unit’ connote[d] sufficiently definite meaning as the name for structure to persons of ordinary skill in the art.” *Id.* The patent holder argued to the Federal Circuit that “because Diebold failed to present affirmative evidence of how a person of ordinary skill would understand the claim language, Diebold failed to rebut the presumption against the application of § 112, para. 6.” *Id.* The Federal Circuit rejected the patent holder’s argument.

As discussed above, the Federal Circuit noted that “none of [its] cases mandate[d] that a party seeking to overcome the presumption against application of § 112, para. 6 can only do so by presenting extrinsic evidence that one of ordinary skill would *fail to* understand that a term connotes a definite structure.” *Diebold Nixdorf*, 899 F.3d at 1299. The Federal Circuit concluded that “Diebold’s failure to contradict” the patent holder’s expert’s “testimony with extrinsic evidence [was] not fatal to its ability to overcome the presumption” because the patent holder’s expert’s testimony was insufficient “to overcome [the] conclusions drawn from the intrinsic record”—that the claims did not recite any structure. *See id.* at 1300.

Here, unlike the challenger in *Deibold*, Alarm.com has *not* shown that the term “message generating mechanism,” when considered together with the surrounding claim language, fails to

recite *any* structure. Alarm.com did not dispute Vivint’s argument that “interface unit” is a structural component of the claimed invention. (*Compare* ECF No. 203 at 9 *with* ECF No. 222 at 5.⁶) Further, Vivint’s position is buttressed by the PTAB. Again, in its institution decision the PTAB expressed its opinion that the claim terms recited such sufficient structure that the terms were not subject to construction under 35 U.S.C. § 112 ¶ 6.

Based on the evidence and arguments presented, the court is persuaded that each of the independent claim terms recite at least some structure—based on their descriptions of the message generating mechanism being “part of” the interface unit. Because the claim terms recite some structure, this case is not like *Diebold Nixdorf*, where the claims did “not recite *any* structure” *Diebold Nixdorf*, 899 F.3d at 1298 (emphasis in original). The court is satisfied that this is not a case where the party bearing the burden to overcome the presumption can do so “solely by reference to evidence intrinsic to the patent.” *Diebold Nixdorf*, 899 F.3d at 1298. Alarm.com must present some extrinsic evidence that one of ordinary skill in the art would fail to understand that the relevant claim terms connote sufficient structure.

Alarm.com does not dispute that Dr. Rhyne’s declaration was the only extrinsic evidence that it produced. (*See* ECF No. 222 at 19.) The question becomes whether Alarm.com’s extrinsic evidence is sufficient to satisfy its burden of demonstrating that a person of ordinary skill in the art would understand the words of the relevant claims to *not* have a sufficiently definite meaning as the name for structure. In answering this question, the court is mindful that “[w]hile ‘the person of ordinary skill in the art’ is a legal construct . . . and claim construction is ultimately a matter for the judges, it cannot be assumed that judges are persons of ordinary skill in all

⁶ In its Opposition, Vivint asserted in its statement of additional facts that “[t]he message generating mechanism is part of the interface unit, which is indisputably a structural component of the claimed invention.” (ECF No. 203 at 9.) In its Reply, Alarm.com did not dispute this fact. (*See* ECF No. 222 at 5.) Nor is the court aware of any portion of the record wherein Alarm.com has disputed Vivint’s assertion.

technological arts.” *Elcommerce.com, Inc. v. SAP AG*, 745 F.3d 490, 506 (Fed. Cir.), *vacated after parties jointly moved to dismiss appeal*, 564 F. App’x 599 (Fed. Cir. 2014). “Nor can it be assumed that, without evidence, [that] a general purpose judge could ascertain the position of persons of skill in the art” *C.f.*, *Elcommerce.com*, 745 F.3d at 506.

As noted above, Vivint argues that Alarm.com’s expert’s declaration is “too conclusory to satisfy its burden of production.” (ECF No. 203 at 25.) In Reply, Alarm.com argues that “Dr. Rhyne’s declaration is far from ‘conclusory.’” (ECF No. 222 at 19.) Alarm.com argues that Dr. Rhyne concluded that “nothing in the relevant claims convey” structure and argued that “[n]othing more could be required to prove a negative: that no structure is recited in the claims.” (ECF No. 222 at 19.) The court rejects Alarm.com’s arguments. The court agrees with Vivint that Dr. Rhyne’s declaration is conclusory.

Considering the timing of Dr. Rhyne’s submission, the court also rejects Alarm.com’s argument that “[n]othing more could be required to prove a negative” (ECF No. 222 at 19.) Dr. Rhyne submitted his declaration long after the PTAB had concluded that the claim terms contain sufficient structure—based on the message generating mechanism being a “part of” the interface unit. Dr. Rhyne’s decision not to address the significance of the interface unit is puzzling. Nowhere in his declaration does Dr. Rhyne even attempt to explain why one skilled in the art would not consider the interface unit to connote a structure. Thus, the court is left simply with his assertion that amounts to no more than he disagrees. Such an assertion without even an explanation is the essence of a conclusory statement. As a matter of law, such statements must be disregarded.

Because Dr. Rhyne’s declaration is conclusory, and because he did not explain why the message generating mechanism being a “part of” the interface unit fails to connote sufficient

structure, Alarm.com has not presented any valid extrinsic evidence that one of ordinary skill would fail to understand that the relevant claim terms connotes a definite structure.⁷ Because the intrinsic evidence recites some structure, and because Alarm.com failed to present any valid extrinsic evidence that the claim terms do not recite sufficient structure, it has failed to overcome the presumption that the claim should not be interpreted under § 112 ¶ 6.

Alarm.com argues that *Net MoneyIN, Inc v. VeriSign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008) precludes Vivint from relying on the interface unit to support its position that the claim terms recite sufficient structure. But *Net Money* involved a presumption that § 112 ¶ 6 applied because the relevant claim term in that case contained the word “means.” *See Net MoneyIN* 545 F.3d at 1365 (“We first address NMI’s contention that the presumption triggered by the presence of the word ‘means’ in claim 1 is rebutted by the recitation of sufficient structure for performing entirely the recited function”).) The Federal Circuit’s conclusion that the claim term was a means-plus function was based on the patent holder’s inability to rebut that presumption. *See id.* at 1366 (“We agree with VeriSign that the recitation in claim 1 of the ‘bank computer’ is not sufficient to rebut the means-plus-function presumption.”); *see id.* (“As a result, the district court correctly concluded that the presumption of means-plus-function treatment had not been overcome.”). The court agrees with Vivint that *Net Money* is distinguishable.

Alarm.com has failed to meet its burden of rebutting the presumption against the application of § 112, ¶ 6. The court agrees with Vivint that it would be legal error to not give

⁷ The court rejects Alarm.com’s argument that “Vivint’s own extrinsic evidence, including its expert’s testimony confirms the lack of any structure in the claims.” (ECF No. 222 at 19.) As an initial matter, the court is skeptical that Alarm.com can meet its burden simply by attempting to discredit Vivint’s expert—instead of relying on its own expert to meet its burden. But even assuming Alarm.com could meet its burden through Vivint’s expert, Alarm.com’s argument fails. Alarm.com focuses largely on McAlexander’s deposition testimony that “[t]he word mechanism by itself in a vacuum, apart from the claim . . . does not specify a particular type of device.” (ECF No. 217-1 at 17, McAlexander Depo. 58:9–16.) Alarm.com overstates the significance of this testimony. While the word “mechanism,” by itself, may not relate sufficiently to structure, Alarm.com has not put forward any evidence that the mechanism being a “part of” the interface unit also fails to sufficiently denote structure.

“effect to the unrebutted presumption against the application of § 112, ¶ 6.” *Zeroclick*, 891 F.3d at 1008. Because the court holds that Alarm.com has failed to rebut the presumption against the application of 35 U.S.C. § 112, ¶ 6, the court adopts Vivint’s proposed construction of the term “message generating mechanism.”

Claim Construction

Claim construction analysis is substantially guided by the Federal Circuit’s decisions in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc). “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*, 415 F.3d at 1312. “[T]he interpretation and construction of patent claims . . . is a matter of law exclusively for the court.” *Markman*, 52 F.3d at 970–71.

“[T]he words of a claim ‘are generally given their ordinary and customary meaning.’” *Phillips*, 415 F.3d at 1312. The Federal Circuit has made clear that “the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. “In construing the meaning of the claims, the starting point and primary source is the intrinsic evidence.” *VR Optics, LLC v. Peloton Interactive, Inc.*, 345 F. Supp. 3d 394, 397 (S.D.N.Y. 2018) (citing *Phillips*, 415 F.3d at 1313–14)).

In the parties’ cross-motions for claim construction, “[t]he parties ask[ed] the Court to construe ten terms” (ECF No. 171 at 5.) The ten terms were:

1. “message profile”/“message profile containing outgoing message routing instructions”⁸

⁸ The parties agreed that the two terms “message profile” and “message profile containing outgoing message routing instructions” “should be construed identically.” (ECF No. 171 at 9.)

2. “computer server”
3. “interface unit”
4. “incoming exception message”
5. “normalizing the incoming message to form a corresponding normalized message having a predetermined uniform format”
6. “message generating mechanism”
7. “message generating means for generating an incoming message corresponding to the detected state of the remote equipment”
8. “normal status message”
9. “periodically”
10. “communication device identification code”

But prior to the hearing on claim construction, the parties “reached agreement regarding the construction of ‘communication identification code’” (ECF No. 261 at 2.) Additionally, the relevant claims for the claim terms “message generating means” and “normalizing the incoming message to form a corresponding normalized message having a predetermined uniform format” are currently stayed. (*See* ECF No. 249 at 24; ECF No. 305.) That left seven terms to be construed. At the hearing, the parties agreed on the construction of four of those terms.

First, the parties agreed on the construction of the term “computer server.” They agreed on the following language: “One or more computers running software to receive incoming messages and process them.” (ECF No. 280 at 35.)

Second, the parties agreed on the construction of the term “interface unit.” They agreed on the following language: “A physical device which is connected at least to one piece of remote equipment or sensor for sending messages to a remote computer server.” (ECF No. 280 at 41.)

Third, the parties agreed on the construction of the term “incoming message exception.” (ECF No. 280 at 41.) They agreed on the following language: “A message that is generated when a piece of equipment operates outside of a predefined set of parameters.” (ECF No. 280 at 43–44.)

Fourth, the parties agreed on the construction of the term “periodically” (*See* ECF No. 280 at 67; 72.⁹) The parties agreed with language proposed by the court: “at pre-defined intervals.” (*See* ECF No. 280 at 72.)

Excluding “message generating mechanism,” the parties did not agree on the construction of two terms: (A) message profile and (B) normal status message. Before addressing the construction of those terms, the court must first decide “who would be ‘a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.’” *Phillips*, 415 F.3d at 1313.

Alarm.com’s expert opined that “a person having ordinary skill in the art” of the relevant patents “would have had, as of January 1999, at least a bachelor’s degree in computer science, electrical engineering, computer engineering, or equivalent coursework, and at least two years of experience in remote monitoring and control systems.” (ECF No. 180 at 721.) Vivint’s expert similarly opined, in relevant part, that “at the time of the invention, a person of ordinary skill in the relevant art of the Asserted Patents (‘POSITA’) has at least a bachelor’s degree in electrical engineering or computer science and at least two years of experience in remote monitoring and

⁹ (ECF No. 280 at 67 (The court: “Why isn’t the correct interpretation of this then at pre-defined intervals.”).)

(ECF No. 280 at 72 (Mr. Stark: “So in sum, Your Honor, we think periodically ought to be interpreted to mean at regular intervals. Predefined intervals would be equally appropriate. Thank you, Your Honor.”).)

(ECF No. 280 at 72 (Ms. Hotze: “Yes, a brief response, Your Honor. We would be fine with Your Honor’s proposal of after a predetermined interval because a computer server does have to be programmed. So that construction would be okay with us. Alarm.com is trying to inject this regular repeating once every 24-hour embodiment into a term which the specification describes more broadly.”).)

control systems and/or an equivalent level of education or experience.” (ECF No. 196 at 536.)

The court adopts Alarm.com’s proposal in full.

A. Message Profile

Claim Term	Vivint’s Proposed Construction	Alarm.com’s Proposed Construction
“message profile”	“data record including multiple routing instructions configurable to specify to which communication devices an outgoing message can be routed in response to an incoming message”	“data record including instructions specifying at least one communication device to which an outgoing message can be routed in response to an incoming message.”

As Alarm.com’s counsel stated at oral argument, “[t]he biggest difference” between the parties’ proposed constructions of the claim term “message profile” “is . . . whether ‘devices’ in Vivint’s proposed construction should be plural, or on the other hand whether as Alarm.com proposes the construction should say ‘specifying at least one communication device.’” (ECF No. 280 at 10–11.) Vivint argues that “the claims and specification are unequivocal that a ‘message profile containing outgoing message routing instructions’ must have the capability to include multiple different devices for different users depending on the message.” (ECF No. 172 at 8–9.) Vivint argues that its construction “is true to the specification’s clear emphasis on the flexibility of the message profile from the user’s perspective . . . and how critical that flexibility was as a key improvement of the invention over the prior art.” (ECF No. 191 at 7.) Having reviewed the specifications and the criticisms of the prior art, the court is persuaded that “devices” should be plural.

Vivint’s counsel also clarified that under Vivint’s interpretation a user would not *have* to send more than one message, she would only have to be *capable* of sending more than one.¹⁰

¹⁰ The court: “So under your interpretation it doesn’t have to send more than one, but it has to be capable of sending

After considering Vivint’s position at oral argument, the court construes “message profile” as a “data record including multiple routing instructions capable of specifying the communication devices to which an outgoing message can be routed in response to an incoming message.”

B. Normal Status Message

Claim Term	Vivint’s Proposed Construction	Alarm.com’s Proposed Construction
“normal status message”	“a message indicative of proper operation of a piece of remote equipment or the interface unit”	“a ‘heartbeat,’ ‘okay,’ or ‘unit checking in’ message”

After discussing the construction of the term “incoming exception message,” the court, at oral argument, proposed that the term “normal status message” is “just the opposite:” “a message that is generated when a piece of equipment operates within a predefined set of parameters.” (*See* ECF No. 280 at 46.) Alarm.com agreed that “exception message” and “normal status message” are “opposites of each other.” (ECF No. 280 at 47.) Vivint argued that because “the Federal Circuit ha[d] already given its stamp of approval” to its construction, it was opposed to adopting the court’s proposal. (*See* ECF No. 280 at 51.) Alarm.com responded that “the Federal Circuit and the PTAB both did not construe the term ‘normal status message’” and argued that the Federal Circuit’s decision is “not binding here” (ECF No. 280 at 54–55.) The court has reviewed the Federal Circuit’s decision, (ECF No. 250-1) and agrees that it is not binding here. The court agrees with its prior reasoning that the jury would benefit from a definition of “normal status message” that mirrors “exception message.” Thus, the court construes the term “normal status message” as “a message that is generated when a piece of equipment operates within a predefined set of parameters.”

more than one.” (ECF No. 280 at 20.)

Mr. Berezin: “That’s right”

The court includes its construction of the seven claims at issue:

Claim Term	Court's Construction
1. "Message profile"	"data record including multiple routing instructions capable of specifying the communication devices to which an outgoing message can be routed in response to an incoming message"
2. "computer server"	"one or more computers running software to receive incoming messages and process them"
3. "interface unit"	"a physical device which is connected at least to one piece of remote equipment or sensor for sending messages to a remote computer server"
4. "incoming message exception"	"a message that is generated when a piece of equipment operates outside of a predefined set of parameters."
5. "message generating mechanism"	"the component of an interface unit that generates messages"
6. "normal status message"	"a message that is generated when a piece of equipment operates within a predefined set of parameters"
7. "periodically"	"at pre-defined intervals"

Conclusion

For the foregoing reasons, the court DENIES Alarm.com's Motion for Partial Summary Judgment, (ECF No. 174) and GRANTS in part and DENIES in part the parties' cross motions for claim construction, (*See* ECF No. 168).

DATED this 6th day of March, 2020.

BY THE COURT:



Clark Waddoups
United States District Judge