

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION**

<b>CELLULAR COMMUNICATIONS EQUIPMENT LLC,</b>	§	
	§	
	§	
<b>Plaintiff,</b>	§	<b>CASE NO. 6:14-CV-759</b>
	§	
<b>v.</b>	§	
	§	
<b>SAMSUNG ELECTRONICS CO., LTD., et al.,</b>	§	
	§	
<b>Defendants.</b>	§	

**MEMORANDUM OPINION AND ORDER**

This Memorandum Opinion construes the disputed claim terms in United States Patent Nos. 7,218,923 (“the ’8923 Patent”), 8,055,820 (“the ’820 Patent”), 8,645,786 (“the ’786 Patent”), and 8,254,872 (“the ’872 patent”), asserted in this suit by Plaintiff Cellular Communications Equipment LLC. The parties’ claim construction briefing also addresses Defendants’ indefiniteness arguments.

On January 12, 2016, the parties presented oral arguments on the disputed claim terms and on the indefiniteness arguments at a Markman hearing. Based on the analysis stated herein, the court resolves the parties’ claim construction and indefiniteness disputes and **ADOPTS** the constructions set forth below.

**BACKGROUND**

Plaintiff Cellular Communications LLC (“CCE”) alleges Defendants infringe the four asserted patents. The patents-in-suit were acquired from Nokia Siemens Networks and generally relate to mobile communications. Doc. No. 131 at 1.

The Court has already construed terms in some of the patents-in-suit in Cellular

Communications Equipment, LLC v. HTC Corp., et. al., No. 6:13-CV-507, Doc. No. 363 (E.D. Tex. Mar. 9, 2015) (“*HTC First Markman Order*”), Doc. No. 413 (June 1, 2015) (“*HTC Second Markman Order*”). The parties have agreed that the Court’s constructions in HTC will apply in the present case. Doc. Nos. 107 at 2, 6 and 131 at 1.

On January 15, 2015, the Patent Trial and Appeal Board (“PTAB”) instituted inter partes review as to claims 1, 2, 4, 5, 8, 24, 25, and 31 of the ’8923 patent. Decision at 2, NEC Corporation of America, et.al. v. Cellular Communications Equipment LLC, No. IPR2014-01133 (P.T.A.B. Jan. 15, 2015). On January 4, 2016, the PTAB issued its Final Written Decision in Case IPR2014-01133 regarding the ’8923 patent. See Final Written Decision, HTC Corporation, et al. v. Cellular Communications Equipment, LLC, No. IPR2014-01133 (P.T.A.B. Jan. 4, 2016)<sup>1</sup>. The PTAB concluded that “Petitioner has not shown by a preponderance of the evidence that claims 1, 2, 4, 5, 8, 24, 25, and 31 are unpatentable under 35 U.S.C. §§ 102(b), 103(a).” Id. at 15.

## **APPLICABLE LAW**

### **Claim Construction**

“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) (quoting Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. Id. at 1313–1314; Bell Atl. Network Servs., Inc. v. Covad *Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. Phillips, 415 F.3d at 1312–13;

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<sup>1</sup> On February 12, 2015, NEC Corporation of America and NEC Mobile Communications, Ltd. were dismissed from the proceeding. Thus, the Final Written Decision issued under a different case name than the Decision Institution of Inter Partes Review.

Bell Atl. Network Servs., 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. Phillips, 415 F.3d at 1312–13; Alloc, Inc. v. *Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court’s construction of claim terms. Phillips, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” Id. Other claims, asserted and un-asserted, can provide additional instruction because “terms are normally used consistently throughout the patent.” Id. Differences among claims, such as additional limitations in dependent claims, can provide further guidance. Id.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” Id. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370, 116 S.Ct. 1384, 134 *Led.2d* 577 (1996)). “[T]he 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. (quoting *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); see also *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. Phillips, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. See *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. See *Irdeeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms “where the ordinary and

accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at 1325. For example, “[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.” *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); see also *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent”). The well-established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002); see also *Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 994 (Fed. Cir. 2003) (“The disclaimer . . . must be effected with ‘reasonable clarity and deliberateness.’”) (citations omitted). “Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover.” *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). “As a basic principle of claim interpretation,

prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." *Omega Eng'g, Inc.*, 334 F.3d at 1324.

Although "less significant than the intrinsic record in determining the legally operative meaning of claim language," the Court may rely on extrinsic evidence to "shed useful light on the relevant art." *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful." *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

### **Means-Plus-Function Limitations**

Where a claim limitation is expressed in "means-plus-function" language and does not recite definite structure in support of its function, the limitation is subject to 35 U.S.C. § 112, ¶ 6. *Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997). In relevant part, 35 U.S.C. § 112, ¶ 6 mandates that "such a claim limitation 'be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.'" *Id.* (citing 35 U.S.C. § 112, ¶ 6). Accordingly, when faced with means-plus-function limitations, courts "must turn to the written description of the patent to find the structure that corresponds to the means recited in the [limitations]." *Id.*

Construing a means-plus-function limitation involves two inquiries. The first step

requires “a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Once a court has determined the limitation’s function, “the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A structure is corresponding “only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* Moreover, the focus of the corresponding structure inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.*

There is a rebuttable presumption that 35 U.S.C. § 112, ¶ 6 does not apply when the term “means” is not utilized. See *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348–1349 (Fed. Cir. 2015) (holding that a presumption exists if the word “means” is not used but overturning the prior standard that the presumption is “strong”). This presumption is rebuttable, however, because “the essential inquiry is not merely the presence or absence of the word ‘means’ but 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.* at 1348 (citing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)). Thus, “[w]hen a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply 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.’” *Id.* at 1349 (citing *Watts v. XL Systems, Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

### **Claim Indefiniteness**

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. “[I]ndefiniteness is a question of law and in effect part of

claim construction.” ePlus, Inc. v. Lawson Software, Inc., 700 F.3d 509, 517 (Fed. Cir. 2012). A party challenging the definiteness of a claim must show it is invalid by clear and convincing evidence. Young v. Lumenis, Inc., 492 F.3d 1336, 1345 (Fed. Cir. 2007).

The definiteness standard of 35 U.S.C. § 112, ¶ 2 requires that:

[A] patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty. The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable. The standard we adopt accords with opinions of this Court stating that “the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.”

Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129–30 (2014) (internal citations omitted).

## ANALYSIS

### I. Agreed Terms

The parties have submitted the following agreements (Doc. No. 107 at 4):

Term	Agreed Construction
“connection means for setting up the emergency call connection” (’872 patent, cl. 12)	<p>The parties agree this is a means-plus-function element to be construed in accordance with 35 U.S.C. 112(6).</p> <p>The parties further agree that the function is “setting up the emergency call connection.”</p> <p>The parties do not agree on the corresponding structure.</p>
“receiving means for receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network” (’872 patent, cl. 12)	<p>The parties agree this is a means-plus-function element to be construed in accordance with 35 U.S.C. 112(6).</p> <p>The parties further agree that the function is “receiving a network identifier of a visited network notified to a terminal when the terminal is registered in the visited network.”</p>

	The parties do not agree on the corresponding structure.
“comparison means for comparing the received network identifier of the visited network with a network identifier of a home network of the terminal” (’872 patent, cl. 12)	<p>The parties agree this is a means-plus-function element to be construed in accordance with 35 U.S.C. 112(6).</p> <p>The parties further agree that the function is “comparing the received network identifier of the visited network with a network identifier of a home network of the terminal.”</p> <p>The parties do not agree on the corresponding structure.</p>

In light of the parties’ agreements on the proper function for these terms, the Court **ADOPTS** these proposed functions.

**II. Disputed Terms in the ’8923 Patent**

The ’8923 Patent, titled “Control of Terminal Applications in a Network Environment,” issued on May 15, 2007, and bears an earliest priority date of December 18, 2003. The Abstract states:

A mechanism and method for controlling the rights and/or behavior of applications in a terminal, especially in a mobile terminal, are disclosed. At least some of the messages generated by an application residing in the terminal and destined for a communication network are diverted to an independent controlling entity also residing in the terminal. In the controlling entity, the messages are controlled before being transmitted to the network. Depending on the application and its behavior in the terminal, the control entity may modify the messages or even prevent their sending to the network. The modification may include inserting control data, such as a digest, which can be used to authenticate the application.

**a. “controlling entity” (Claims 1, 4, 24, and 26)**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
No construction necessary. Not subject to 35 U.S.C. 112(6).  Alternatively, should the Court determine this term is subject to 35 U.S.C. 112(6):	Indefinite.  This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.



<p>Function:  “controlling, based on the message and before the message is transmitted to the communication network, whether the application program behaves in a predetermined manner in the communication terminal”</p> <p>Structure:  “trusted entity/agent 212 (and equivalents). See, e.g., 1:59-2:67, 3:57-66, 4:46-54, 4:20-42, 6:27-48, 6:49-67, 7:13-8:19, 4:63-5:5 and in Figs. 2-3 and 5-10”</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is:  “trusted entity/agent 212 configured to perform one or more of the algorithms described in the ’8923 patent at Abstract, 1:63-2:11, 4:61-67, 6:27-48, Figs. 2-3 and 5-6 (and equivalents).”</p>	<p>Function:  “controlling . . . whether the application program behaves in a predetermined manner”</p> <p>Structure:  no corresponding structure disclosed</p> <p>Alternatively, should the Court find the limitations not indefinite, the following additional constructions should apply:  “The controlling entity is a physically separate component from the diverting unit.”  “The controlling step must be performed by a component physically separate from the component that performs the diverting step.”</p>
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The parties completed claim construction briefing before the issuance of the PTAB’s Final Written Decision as to the ’8923 patent. The parties agreed to submit the term “controlling entity” on the papers, and the term was not argued at the January 12, 2016 Markman hearing. The Court did allow supplemental briefing on the narrow issue of what was represented to the PTAB that might be inconsistent with what was represented to the Court in the claim construction briefing.

Defendants argue that the “controlling entity” limitation is a means-plus-function limitation. Doc. No. 138 at 32. Defendants liken the word “entity” to the words “unit” or “device” and other “nonce” terms under Williamson. *Id.* Defendants argue that “[t]he prefix ‘controlling’ adds no more to the generic term ‘entity,’ because controlling simply refers to the claimed functionality and not the structural detail.” *Id.* Defendants state that “the ’8923 patent

specification only refers to the controlling entity as the ‘trusted agent 212’ and its claimed functionality.” Id. Defendants note that “the specification never provides any structural detail on the ‘trusted agent 212,’ and the figures illustrate that the entity is nothing more than a structurally nondescript black box. . . .” Id.; see id. at 32-33. Further, Defendants argue, “[n]one of the ’8923 figures provide details of how the trusted agent is structured or any specific algorithm for performing its claimed function.” Id. at 33.

Additionally, Defendants argue that, if the Court does not find the “controlling”/“controlling entity” limitations indefinite, the Court should construe “controlling entity” in accordance with the express findings of the PTAB, which were made in reliance on CCE’s arguments regarding claim construction in IPR2014-01133. Doc. No. 173 at 1. Defendants submit that two additional constructions should apply to claims 1, 4, 24, and 26: “(1) The controlling entity of claims 24 and 26 is a physically separate component from the diverting unit; and (2) The controlling step of claims 1 and 4 must be performed by a component physically separate from the component that performs the diverting step.” Id.

CCE first argues that “controlling entity” is distinguishable from “nonce” words that have been found to invoke 35 U.S.C § 112, ¶ 6. Doc. No. 142 at 19. CCE states that “controlling entity” is “specific control software that takes action based on a data structure (a message) and controls whether other software (the application program) behaves in a predetermined manner.” Id.; Doc. No. 142, Ex. G (“Royer Decl.”) at ¶ 72. Thus, CCE’s expert concludes that one skilled in the art “would recognize such a software component as physical structure comprised of executable program code, in the same way the application program is structure.” Royer Decl. at ¶ 72.

Next, CCE argues that even if “controlling entity” is subject to § 112, ¶ 6, it is not

indefinite because “the specification discloses that the structure clearly linked to ‘controlling...whether the application program behaves in a predetermined manner’ is trusted entity/agent 212.” Doc. No. 142 at 19. CCE concludes that “[b]ecause the ‘trusted entity/agent’ described in the specification is specific software structure rather than a general purpose processor, no algorithm is necessary.” Id. at 19. Alternatively, CCE argues that even if an algorithm is necessary, the ’8923 patent disclosure satisfies the algorithm requirement. Id. at 20.

Finally, CCE argues that Defendants’ additional proposed constructions mischaracterize the IPR record. CCE argues that the claims do not require that the “intervening diverting step be performed by a function or mechanism **physically** separate from the controlling entity.” Doc. No. 179 at 1. CCE states that the specification “merely provides that distinct logical mechanisms perform the diverting and controlling” and that “physical separateness” is not required. Id. CCE argues that this is consistent with the PTAB’s interpretation of claims 1 and 24. Id. Furthermore, CCE contends that it never argued that “the diverting and controlling must be performed by **physically** separate components.” Id. at 2.

Because “controlling entity” does not use the word “means,” a rebuttable presumption arises that this disputed term is not a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6. See *Williamson*, 792 F.3d at 1348.

Claim 1 of the ’8923 Patent, for example, recites (emphasis added):

1. A method for controlling application programs in a communication terminal, the method comprising:
  - sending messages ...;
  - diverting a message of the messages to a controlling entity residing in the communication terminal; and
  - based on the message, controlling in the controlling entity whether the application program behaves in a predetermined manner in the communication terminal, the controlling being performed before the message is transmitted from the communication terminal to the communication network.

The Summary of the Invention discusses the “controlling entity” and notes that it “is also termed the trusted agent in this context”:

In the present invention, the control mechanisms rest on a separate controlling entity residing in a terminal. At least some of the outbound messages generated by an application in a terminal are diverted to the controlling entity on their way from the application to the network. The controlling entity evaluates whether any changes are needed in the message or in the behavior of the application. Based on the evaluation, the control entity then returns the message intact or in a modified form. The controlling entity may even prohibit the sending of the message, if it detects that the application has no pertinent rights or that the application is not behaving, as it should. The controlling entity resides in a tamper resistant area of the terminal, so that its operation cannot be affected by the user or other parties that are beyond the control of the network operator. The outbound messages of an application are thus controlled by a controlling entity, which is totally independent of the applications residing in the terminal. Due to its nature, the controlling entity is also termed the trusted agent in this context.

’8923 Patent at 1:59-2:11 (emphasis added).

The specification also discloses a “trusted agent 212, which acts as a controlling entity controlling the rights and behavior of the applications” and which “may be a dedicated software agent or a Digital Rights Management (DRM) agent whose normal functionality has been modified for the method of the invention.” *Id.* at 3:57-66 (emphasis added). Further, the specification discloses that the trusted agent can “check[] whether [an] application behaves as it should be behaving” and can take corrective action if appropriate:

[T]he application starts a session by sending an INVITE request according to the SIP protocol to the opposite terminal (step 4). The INVITE request invites the opposite terminal to participate in the session, which is here assumed to be a chess session, and it includes a description of the session, for example. The INVITE request further includes the identifier of the application, which is then utilized by the SIP protocol stack. When the protocol stack receives the outbound INVITE request generated by the application, it checks from the application repository whether the application is such that it needs to be controlled (step 5). If the application identifier is found in the repository, the repository returns a positive

response (step 6) indicating that the application needs to be controlled. When the protocol stack receives the positive response, it sends the INVITE request to the trusted agent (step 7). The trusted agent then examines the request and checks, whether the application behaves as it should be behaving (step 8). The trusted agent may modify the request, for example by adding control data, such as control parameters, to the request. As discussed below, the trusted agent may also prohibit the sending of the request. If the trusted agent allows the sending of the request, it returns the request, either as such or in a modified form, to the SIP protocol stack (step 9). The protocol stack then transmits the INVITE request to the network (step 10).

Id. at 4:46-65 (emphasis added); see id. at 6:27-41 (similar).

On one hand, “[m]any devices take their names from the functions they perform. The examples are innumerable, such as ‘filter,’ ‘brake,’ ‘clamp,’ ‘screwdriver,’ or ‘lock.’” Greenberg, 91 F.3d at 1583. Plaintiff’s expert, Mr. Claude Royer, opines:

In my opinion, a POSA [(person of ordinary skill in the art)] would understand “controlling entity,” as that term is used in the claims, has definite meaning as the name for structure, i.e., specific control software residing in the claimed terminal.

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It is well known by those of skilled in the art that an “application program” is software. A POSA would also know that any “message” sent from an application to another entity within the terminal is an electronic data structure generated and interpreted by software. Thus, the claim language states that the “controlling entity” takes action based on a data structure (a message) and controls whether software (the application program) behaves in a predetermined manner, making clear that the “controlling entity” is specific control software that interacts with other software components and data structures. A POSA would recognize such a software component as physical structure comprised of executable program code, in the same way the application program is structure.

Royer Decl. at ¶¶ 70, 72.

On the other hand, neither the above-quoted intrinsic evidence nor any other intrinsic evidence cited by Plaintiff identifies any particular class of structures associated with the term “controlling entity.” For example, disclosure that the controlling entity “may be” a dedicated

software agent or a Digital Rights Management (DRM) agent (see '8923 Patent at 3:57-66) does not demonstrate that the term “controlling entity” refers to any particular class of structures. Williamson, 792 F.3d at 1350 (“Generic terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they typically do not connote sufficiently definite structure . . . .”) (citation and internal quotation marks omitted).

On balance, “controlling entity” does not connote any particular structure or class of structures and is therefore a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6. As to the claimed function, the parties have not presented any arguments as to the function and have essentially agreed upon “controlling . . . whether the application program behaves in a predetermined manner in the communication terminal,” which is consistent with the claim language. See Doc. No. 138 at 32; see also Doc. No. 142 at 19.

As to corresponding structure, the above-quoted passages link the “trusted agent 212” to the claimed function.

Defendants’ expert, Dr. J. Stevenson Kenney, opines:

[A] black box recitation of structure (and undisclosed modifications of such structure), however, does not imply any sufficiently definite structure for performing the function of “controlling . . . whether the application program behaves in a predetermined manner,” nor does it inform one of ordinary skill in the art about the proper scope of the claims or serve any legitimate public notice function.

Doc. No. 138, Ex. 1 (“Kenney Decl.”) at ¶ 92.

The above-quoted disclosures in the specification demonstrate that the word “agent” refers to a particular type of software structure and is adequate corresponding structure for the term “controlling entity.” See, e.g., '8923 Patent at 3:57-66, 4:46-65 & 6:27-41; see also *Genband USA LLC v. Metaswitch Networks Ltd.*, No. 2:14-CV-33-JRG-RSP, 2015 WL

4722185, at \*18 (E.D. Tex. Aug. 7, 2015) (noting dictionary definitions and other evidence indicating that “‘agent’ has structural meaning”). Further, because the “trusted agent 212” is not a general-purpose computer, the algorithm requirement does not apply. See, e.g., *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (“In a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.”).

Additionally, CCE should be held to its position in the IPR, which the PTAB adopted, that the controlling entity must be separate from the diverting unit. However, Defendants’ proposal that the controlling entity must be physically separate from the diverting unit is not supported. Ultimately, the required degree of separation is a question of fact for determining infringement rather than a question of claim construction. See *Smartflash LLC v. Apple Inc.*, Case No. 6:13-cv-447-JRG-KNM, Doc. No. 432 at 10-11 (E.D. Tex. Jan. 26, 2015); see also *PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“[A]fter the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact.”); *EON Corp. IP Holdings LLC v. Silver Springs Networks, Inc.*, --- F.3d ----, 2016 WL 766661, at \*3 (Fed. Cir. Feb. 29, 2016) (citing PPG).

Accordingly, “**controlling entity**” is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, the claimed function is “**controlling...whether the application program behaves in a predetermined manner in the communication terminal,**” and the corresponding structure is

**“trusted agent 212, which must be separate from the diverting unit (in Claim 24) or the component that performs the diverting step (in Claim 1).”**

### **III. Disputed Terms in the '820 Patent<sup>2</sup>**

The '820 Patent, titled “Apparatus, System, and Method for Designating a Buffer Status Reporting Format Based on Detected Pre-Selected Buffer Conditions,” issued on November 8, 2011, and bears an earliest priority date of November 5, 2007. The Abstract states:

An apparatus, system and method for increasing buffer status reporting efficiency and adapting buffer status reporting according to uplink capacity. User equipment is configured a [sic, to] monitor a usage of a plurality of buffers, detect one of a plurality of pre-selected conditions corresponding to at least one of the plurality of buffers, designate one of a plurality of buffer status reporting formats depending on the pre-selected condition detected, communicate a buffer status report to a network device in accordance with the buffer status reporting format designated. The buffer status reporting format is configured to minimize buffer status reporting overhead created by the communicating of the buffer status report.

#### **a. “monitoring a usage of a plurality of buffers” (Claims 1, 12, and 24)**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
No construction necessary	“monitoring an act, way, or manner of using a plurality of buffers”

CCE argues that the Court previously rejected Defendants’ similar proposed construction of the term “usage” in a prior case. Doc. No. 131 at 5 (citing HTC Second Markman Order at 4-7). In HTC, the Court found that “[t]he specification does not limit the definition of ‘usage’ to a particular meaning different from or narrower than the term’s plain meaning.” HTC Second Markman Order at 5. The Court expressly rejected the defendants’ proposal that “usage” means “an act, way, or manner of using.” Id. at 6; see id. at 4-7.

Defendants acknowledge that “usage” was previously construed by this Court in an

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<sup>2</sup> Defendants originally requested permission to argue that “the designating unit” in Claim 12 of the '820 Patent lacks corresponding structure and is therefore indefinite. This argument was rejected previously in HTC. See HTC First Markman Order at 28-31. Thus, the Court denied Defendants’ request to present indefiniteness arguments again as to the same term in this case. See Doc. No. 135.



earlier case. Doc. No. 138 at 25. However, they argue that the Court’s prior finding of “no construction necessary” for “usage” does not resolve the current dispute as to the scope of the claim limitation. *Id.* They argue that the term “‘monitor[ing] a usage of a plurality of buffers’ deserves a second look in light of clear language in the specification.” *Id.* at 25-26. However, CCE argues that nothing in the specification supports Defendants’ restrictive construction. Doc. No. 131 at 7. CCE contends that Defendants’ proposal does not reflect the broad ordinary meaning of “usage,” but rather constricts the ordinary meaning by excluding definitions relating to “fact of being used.” Doc. No. 131 at 6; Doc. No. 142 at 2.

Previously, in *HTC*, the Court expressly rejected Defendants’ proposal that “usage” means “an act, way, or manner of using.” *HTC* Second Markman Order at 5. The Court found that the specification “did not limit the definition of ‘usage’ to a particular meaning different from or narrower than the term’s plain meaning.” *Id.* at 5. Here, Defendants have failed to demonstrate why the Court should depart from its prior finding in *HTC*. Defendants argue that the specification makes clear that “monitoring a usage of one or more communications buffers” is narrower in scope than merely “monitoring buffers.” Doc. No. 138 at 27. However, the phrase “monitoring buffers” does not appear in the claims. The specification refers to monitoring buffers, but there is no evidence that this reference supports constricting the definition of “usage” to “an act, way, or manner of using.” Thus, the Court rejects Defendants’ argument that “monitoring a usage of a plurality of buffers” must be narrower than “monitoring buffers” or must exclude buffer status. The Court therefore rejects Defendants’ proposed construction.

No further construction is necessary. See *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the

claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); see also *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *ActiveVideo Networks, Inc. v. Verizon Commcn’s, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012).

Therefore, the Court construes “**monitoring a usage of a plurality of buffers**” to have its **plain meaning**.

**b. “network device” (Claims 1, 12, and 24)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>No construction necessary. Not subject to 35 U.S.C. 112(6).</p> <p>Alternatively, “base station.”</p>	<p>Indefinite.</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “receiving the communicated buffer status report”</p> <p>Structure: no corresponding structure disclosed</p>

Defendants argue that “network device” is a means-plus-function limitation under the Williamson standard and thus must be construed in accordance with § 112, ¶ 6. Doc. No. 138 at 29. They state that those of ordinary skill “would not understand the term ‘device’ to be sufficiently definite structure, even when paired with the term ‘network.’” *Id.* Defendants contend that the specification consistently describes “‘network device’ with respect to its functional capabilities but never in terms of any particular structure for implementing those

functions.” Id. at 30. Thus, Defendants conclude that “network device” is a means-plus-function term and indefinite. Id.

First, CCE argues that the term is not means-plus-function. Doc. No. 142 at 3. CCE contends that the claims “do not even recite a function for the ‘network device’ to perform” and Defendants’ proposed function cannot be found within the claims. Id. Second, CCE argues that “in the context of the ’820 patent, ‘network device’ designates structure to skilled artisans—namely, a base station.” Id.

The term “network device” does include the word “device,” which Williamson placed in the category of “nonce” words. See Williamson, 792 F.3d at 1350. However, the disputed term also includes a preceding modifier, “network,” which changes the meaning of the word “device.” See id. at 1350-51 (“the presence of modifiers can change the meaning of ‘module’”). The specification shows how “network device” designates structure:

FIG. 5 is a block diagram representing a short buffer status reporting format 500 in accordance with one embodiment of the present invention. The depicted short buffer status reporting format 500 includes a radio bearer group identity 510, and a buffer size 520. The radio bearer group identity 510 enables a network device, such as a base station, to know the buffer status, i.e., to determine the data in a buffer corresponding to a radio bearer group.

’820 Patent at 8:40-47 (emphasis added); see id. at 5:40-42 (“In certain embodiments, the network device 120 is configured to receive buffer status reports from the user equipment 110.”).<sup>3</sup> Thus, the word “network” gives rise to structural connotations when coupled with the word “device,” as reinforced by the specification.

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<sup>3</sup> See also Doc. No. 142, Ex. E, Wiley Electrical & Electronics Engineering Dictionary (“*Wiley Dictionary*”) 62 (2004) (defining “base station” as “1. In a land-mobile system, a land station that maintains communications with land-mobile stations. A base station may also communicate with other base stations. 2. In a land-mobile system, a fixed-location station which communicates with mobile stations. 3. A site which has the necessary transmission and reception equipment to provide cellular phone coverage in a given geographical area. All incoming and outgoing calls within this zone are handled by this station. The area served by a given base station is called a cell. . . .”).

The disputed term “network device” also does not appear “in a format consistent with traditional means-plus-function claim limitations.” *Williamson*, 792 F.3d at 1350. In *Williamson*, the court noted that the relevant portion of the claims at issue “replaces the term ‘means’ with the term ‘module’ and recites three functions performed by the ‘distributed learning control module.’” *Id.* Here, by contrast, claim 1 recites:

1. A method, comprising:
  - monitoring a usage of a plurality of buffers;
  - detecting one of a plurality of pre-selected conditions corresponding to the plurality of buffers;
  - designating one of a plurality of buffer status reporting formats comprising a long buffer status reporting format and a short buffer status reporting format depending on the pre-selected condition detected; and
  - communicating a buffer status report to a network device in accordance with the buffer status reporting format designated, wherein the designating designates the long buffer status reporting format when there is sufficient uplink bandwidth to communicate using the long buffer status reporting format.

(emphasis added). The claim does not recite any functional limitation associated with the “network device” other than perhaps merely being the recipient of a buffer status report. See *id.*; see also *TecSec, Inc. v. Int’l Business Machines Corp.*, 731 F.3d 1336, 1348 (Fed. Cir. 2013) (“The term ‘digital logic means’ is also not subject to § 112, ¶ 6. As an initial matter, the claims do not recite a function for the digital logic to perform.”). Thus, the disclosures in the specification as well as the context in which the disputed term is used in the claims demonstrate that “network device” is not a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6. As such, Defendants’ proposed construction is rejected. No further construction is necessary.

Therefore, the Court construes “**network device**” to have its **plain meaning**.

#### **IV. Disputed Terms in the ’786 Patent**

The ’786 Patent, titled “Decoding Method,” issued on February 4, 2014, and bears an earliest priority date of September 15, 2004. The Abstract states:

A decoding method for decoding information content in at least one data packet, which is transmitted from a sender to a receiver via a data link. The information is represented by a bit sequence, which is transformed into a transmittable redundancy version. The information is initially transmitted for a first time in a first data packet from the sender to the receiver. The information is represented by a first redundancy version, which is self-decodable. An incorrect receipt is confirmed by sending a confirmation from the receiver to the sender. The information is retransmitted at least a second time in a second data packet from the sender to the receiver upon receipt of the confirmation, wherein, for representation of the information, a second redundancy version is used, the selection of which is performed in dependence on a coding parameter, describing whether the redundancy version is self-decodable or not.

**a. “self-decodable” (Claims 1 and 12)<sup>4</sup>**

<b>Plaintiff’s Proposed Construction</b>	<b>Defendants’ Proposed Construction</b>
No construction necessary	“decodable only by itself without considering other data”

CCE argues that self-decodability “is not an absolute quality of transmitted information,” but rather, it is “a characteristic describing how information is represented prior to transmission.” Doc. No. 131 at 9. CCE argues that Defendants’ proposed construction is overly narrow and vague and that it is unclear what “other data” cannot be considered under Defendants’ proposal. Id.

Defendants argue that the ’786 specification “expressly defines the term ‘self-decodable,’ and that express definition governs.” Doc. No. 138 at 18. Defendants point to the specification which states, in the context of describing a redundancy version, “self-decodable, that means decodable only by itself...” ’786 Patent at 2:59-60. CCE does not appear to dispute this, noting that self-decodable “denotes...something can be decodable by itself.” Doc. No. 142 at 4. Defendants then argue that “without considering other data” is a “necessary component of the construction” because the specification shows that a redundancy version (“RV”) can only be self-decodable if it is decodable without considering any other RVs. Doc. No. 138 at 19 (citing

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<sup>4</sup> This term appears in the ’786 patent both with and without a hyphen. The parties have not attributed any significance to the presence or absence of a hyphen in “self-decodable” or “self decodable.”

'786 Patent at 8:39-50). Defendants contend that Plaintiff offers no support to show that a lay juror would understand this “highly-technical term used in the context of a wireless communications scheme.” Doc. No. 138 at 19.

Both sides seem to agree that the specification provides that “self-decodable” means decodable by itself. The term “only” that Defendants point to in the specification does not mean without consideration of any other data, but rather it means without consideration of others of that same type. '786 Patent at 2:57-60. The disclosures in the specification show that “self-decodable” refers to whether a data packet can be decoded without reference to any other data packets, not “without considering other data” as the Defendants have proposed. See *id.* at 8:39-50 (“The parameter *s* specifies whether the RV is self decodable, this means decodable if only this RV is considered...Such a redundancy version is typically self decodable, that means, that it can be decoded by itself...This is not the case when *s*=0 (parity bits are prioritized), where it can happen that a RV cannot be decoded by itself, even in the absence of noise, but only together with an other [sic, another] RV”).

Therefore, the Court construes “**self-decodable**” to mean “**decodable by itself.**”

**b. “self decodable rate matching pattern” (Claim 1)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>“rate matching patterns”: “patterns for puncturing and/or repeating bits”</p> <p>“self decodable”: no construction necessary</p>	<p>This term is indefinite under 35 U.S.C. § 112, ¶ 2.</p>

Defendants argue that “self decodable rate matching pattern” is indefinite because it is a nonsensical term with an unclear scope. Doc. No. 138 at 22-23. First, Defendants argue that the term is not explained in the '786 patent and “not used outside of the '786 patent and related

applications.” Id. at 22. They state that the ’786 patent defines the sub-phrases “self decodable” and “rate matching pattern” separately, but that the combined term is nonsensical because “a rate matching pattern cannot literally be self decodable.” Id.; Id. at 24. Second, Defendants argue that the ’786 patent itself “teaches away from rate matching patterns being ‘self decodable.’” Id. at 23. They state that, in the ’786 patent, parameters “r” and “s” operate independently of each other and thus “the selection of a rate matching pattern (parameter r) does not affect whether the redundancy version is self decodable (parameter s).” Id.; See also Kenney Decl. at ¶73. Thus, Defendants conclude that a “self decodable rate matching pattern” “is contradicted by the disclosure of the ’786 patent.” Id. Defendants draw a distinction between the “rate matching stage” and the “rate matching pattern,” concluding that “[t]he parameter s thus makes sense in the context of the broader ‘stage,’ but there is no way to apply the parameter to the ‘pattern.’” Doc. No. 148 at 3.

CCE responds that Defendants’ characterization of the term “self decodable rate matching pattern” as a “rate matching pattern” that is itself “self decodable” is illogical when read in context. Doc. No. 142 at 7-8. CCE argues that “the patent confirms that varying parameter s for a given parameter r results in different rate matching patterns, some of which yield a self-decodable data packet and others which do not.” Id. at 7 (citing Royer Decl. at ¶ 42). Thus, CCE concludes that the “self-decodable property of a data packet therefore results directly from the rate matching pattern that produced the packet” and one skilled in the art would understand the term perfectly. Id. CCE draws an analogy by arguing that the ordinary phrase “healthy recipe” is not read to refer to a “recipe that is, itself, healthy” but rather a “recipe used to produce something healthy.” Id. at 8. Similarly, CCE concludes, a “self decodable rate matching pattern” is not read to refer to a “rate matching pattern” that is, itself, “self decodable,”

but rather a “rate matching pattern used to produce self-decodable information (by prioritizing systematic bits during rate matching).” *Id.*

The specification discloses that “[r]ate matching is the puncturing or repeating of bits in order to achieve a desired final number of data in a certain time interval or correspondingly a desired data rate.” ’786 Patent at 9:36-39. Although Defendants appear to argue that a rate matching pattern must itself be “self-decodable,” the context of claim 1 demonstrates that the disputed term refers to whether the resulting data packet is self-decodable.

Defendants’ expert concludes that “it is unclear what is meant by a ‘self decodable rate matching pattern’ because the selection of a rate matching pattern (parameter  $r$ ) does not affect whether the redundancy version is self decodable (parameter  $s$ ).” Kenney Decl. at ¶ 73. However, the specification contains no clear disclosure in favor of such a reading. Furthermore, to whatever extent such a feature is present, it is a particular feature of preferred embodiments that should not be imported into the claim. See *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988) (“Although the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.”); see also *Phillips*, 415 F.3d at 1323; *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“While we read claims in view of the specification, of which they are a part, we do not read limitations from the embodiments in the specification into the claims.”). The specification also discloses: “If  $s=1$ , then when puncturing during rate matching the so called systematic bits are prioritized over the parity bits of the turbo code. Such a redundancy version is typically self decodable . . . .” ’768 Patent at 8:43-46 (emphasis added). This disclosure reinforces the conclusion that the rate matching pattern can have an effect on whether a redundancy version is self-decodable. See



Royer Decl. at ¶42.

In Defendants' Reply, they contend that CCE's argument is also "contradicted by the patentee's express statement that the rate matching pattern is 'based on' the parameter r." Doc. No. 148 at 3 (citing Ex 1, Sept. 19, 2013 Amendment at 11 ("Amendment")). Defendants argue that the patentee expressly stated that r specifies the rate matching pattern, and that statement is in direct contrast to CCE's argument now that the rate matching pattern can be changed by changing the parameter s. See Doc. No. 183, Markman Transcript at 31:21-32:1 ("They always say [r] specifies the rate[ ]matching pattern...[n]ow, in contrast here in the district court case, Plaintiff is arguing that the rate[ ]matching pattern can change by changing [s]."). However, the prosecution history cited by Defendants does not contain any clear disclaimer in this regard. See *Omega Eng'g*, 334 F.3d at 1324 (Fed. Cir. 2003) ("As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution.") (emphasis added); see also *id.* at 1325-26 ("[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.") (emphasis added).

The Sept. 19, 2013 Amendment states that the "rate matching pattern...is based on the rate matching parameter r." Amendment at 11. The intrinsic record never states that parameter r alone determines the rate matching pattern. CCE argues that during prosecution the applicants merely explained that the rate matching pattern is "based on" rate matching parameter r, not that the rate matching pattern is exclusively determined by rate matching parameter r. Doc. No. 142 at 7 n. 2. Furthermore, the specification states that "the parameters of the rate matching stage depend on the value of the RV parameters s and r." '786 Patent at 7:61-62 (emphasis added).

While Defendants are correct that this portion of the specification refers to the rate matching stage, not the rate matching pattern, the specification goes on to show “how the rate matching pattern is derived.” Id. at 8:21. “‘Rate matching determination’ deals with the exact determination of the rate matching pattern based on the parameters  $e_{plus}$ ,  $e_{minus}$  and  $e_{ini}$ .” Id. at 8:23-25. CCE argued during the Markman Hearing that “ $e_{minus}$  and  $e_{initial}$ ...depend directly on the value of parameter  $s$ ” and thus  $s$  “does influence the rate[ ]matching pattern.” Transcript at 40:4-10 (citing to R1-041354, §4.5.4.3). Thus, Defendants have failed to show any statements by the patentee during prosecution that rise to the level of a clear disclaimer.

In sum, Defendants have failed to demonstrate that the selection of a rate matching pattern is necessarily independent of self-decodability.

Defendants’ final argument is that CCE’s changes in its proposed construction show that the disputed term lacks a clear scope. Defendants state that CCE has proposed: (1) “rate matching patterns that prioritize systematic bits” (P.R. 4-2 Disclosure); (2) “‘self decodable’: no construction necessary” and “‘rate matching patterns’: ‘patterns for puncturing and/or repeating bits’” (P.R. 4-3 statement); and (3) “a rate matching pattern that produces self-decodable information” (Plaintiff’s letter brief in response to Defendants’ letter brief regarding indefiniteness). Doc. No. 138 at 24. These constructions are not inconsistent with one another. The mere fact that CCE revised its proposed constructions does not demonstrate indefiniteness.

Therefore, the Court construes “**self decodable rate matching pattern**” to mean “**a rate matching pattern that produces self-decodable information.**”

## **V. Disputed Terms in the ’872 Patent**

The ’872 Patent, titled “Simplified Method for IMS Registration in the Event of Emergency Calls,” issued on August 28, 2012, and bears an earliest priority date of April 27,

2006. The Abstract states:

Simplification of IMS registration in the event of emergency calls is made possible by apparatuses and a method for setting up an emergency-call connection from a terminal to an IMS via a network visited by the terminal, where, if the terminal is already registered in the IMS, setup of an emergency-call connection dispenses with IMS registration of the terminal in the IMS for this emergency-call connection if a comparison between a network identification for the visited network, of which the terminal was notified when it registered in the visited network, and a network identification for the terminal's home network reveals a match between these network identifications.

- a. **“receiving means for receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network”/ “comparison means for comparing the received network identifier of the visited network with a network identifier of a home network of the terminal” / “connection means for setting up the emergency call connection” (Claim 12)**

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
<p><b>receiving means for receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network</b></p>	<p>Function:  “receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network”</p> <p>Structure:  “a mobile terminal (and equivalents). See 1:18-26, 2:12-56, 3:19-42, Fig. 1.”</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is:  “a mobile terminal (1:24, 2:15, 2:21, 2:42, 3:19, Fig. 1) configured to perform one or more of the algorithms set forth in the '872 Patent at 2:14-33, 2:40-44, 3:25-29, and Fig. 1 (and equivalents).”</p>	<p>Indefinite.</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function:  “receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network”</p> <p>Structure:  no corresponding structure disclosed</p>
<p><b>comparison means for comparing the</b></p>	<p>Function:  “comparing the received</p>	<p>Indefinite.</p>

<p><b>received network identifier of the visited network with a network identifier of a home network of the terminal</b></p>	<p>network identifier of the visited network with a network identifier of a home network of the terminal”</p> <p>Structure:  “a mobile terminal (and equivalents). See 2:21-39, 2:40-56, 3:30-42, Fig. 1.”</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is:  “a mobile terminal (1:24, 2:15, 2:21, 2:42, 3:19, Fig. 1) configured to perform one or more of the algorithms set forth in the ’872 Patent at 2:15-33, 2:40-49, 3:30-38, and Fig. 1 (and equivalents).”</p>	<p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function:  “comparing the received network identifier of the visited network with a network identifier of a home network of the terminal”</p> <p>Structure:  no corresponding structure disclosed</p>
<p><b>connection means for setting up the emergency call connection</b></p>	<p>Function:  “setting up the emergency call connection”</p> <p>Structure:  “a mobile terminal (and equivalents). See 1:18-26, 2:12-56, 3:19-42, Fig. 1.”</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is:  “a mobile terminal (1:24, 2:15, 2:21, 2:42, 3:19, Fig. 1) configured to perform one or more of the algorithms set forth in the ’872 Patent at 2:49-52, 3:39-41, and Fig. 1 (and equivalents).”</p>	<p>Indefinite.</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function:  “setting up the emergency call connection”</p> <p>Structure:  no corresponding structure disclosed</p>

All of the parties agree that these are means-plus-function terms governed by 35 U.S.C § 112, ¶ 6. The parties also agree upon the claimed function. The dispute centers on whether the specification discloses corresponding structure.

CCE first argues that “[t]he ‘872 Patent clearly states that th[ese] function[s] [are] performed by a terminal in a mobile radio network (i.e., a mobile terminal).” Doc. No. 131 at 12; see id. at 16, 19. CCE then concludes that “[b]ecause the claimed structure is a special-purpose terminal in a mobile network rather than a ‘general purpose computer,’ no algorithm is required.” Id. at 14; see id. at 17-19. Next, CCE argues that “even if the disclosed structure was merely a general purpose computer, no algorithm is required because. . . ‘receiving’ a network identifier — is so basic that it may be performed without special programming.” Id. As a further alternative, CCE argues that even if the Court determined that an algorithm is required, “one skilled in the art would understand that the mobile terminal performs the claimed ‘receiving’ function by obtaining a ‘Mobile Country Code/Mobile Network Code’ (‘MCC/MNC’) from the mobile network as described” in the specification and as illustrated in Figure 1. Id. at 15. Similarly, CCE argues that “if an algorithm was required, the ’872 Patent teaches that the claimed ‘comparing’ function is performed by comparing an MCC/MNC of a visited network with an MCC/MNC of a home network, as detailed in Figure 1 and described at 2:30-33 and 3:32-38.” Id. at 18. Finally, CCE argues that “if the Court determines an algorithm is necessary, the ’872 Patent teaches that the claimed mobile terminal ‘set[s] up the emergency call connection’ using a SIP INVITE message, as detailed in Figure 1 . . . , 2:49-52 . . . , and 3:39-42 . . . .” Id. at 20.

Defendants opine that Claim 12 of the ’872 patent is indefinite because the specification fails to “‘link’ or ‘associate’ structure for performing any of the functions of claim 12’s means-plus-function elements: ‘receiving means,’ ‘comparison means,’ or ‘connection means.’” Doc. No. 138 at 8. Defendants claim that “a terminal” is a “‘generic and nondescript’ term that includes a variety of functions and must be specially programmed to perform certain functions.”

Id. They further argue that there is no disclosure of what structure “within the terminal performs the functions of each means-plus-function term.” Id. Thus, Defendants conclude, the “terminal” could be “so broad as to cover a computer workstation.” Id. In essence, Defendants argue that the specification discloses the “terminal’s functions,” but not the actual structure of the terminal. Id. at 11. They state that “the functionality of the terminal is not a description of structure” but rather “an abstraction that describes the claimed functional elements, which are performed by some undefined component of the system.” Id. Thus, Defendants conclude that because “there is nothing in the ’872 specification that makes the disclosed ‘terminal’ anything but a general purpose computer for performing the claimed functions, CCE must demonstrate that the ’872 patent discloses an algorithm for performing the claimed functions. Id. at 12.<sup>5</sup>

“Structure supporting a means-plus-function claim under § 112, ¶ 6 must appear in the specification.” *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 952 (Fed. Cir. 2007). However, “the amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention.” *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1384-85 (Fed. Cir. 2011); see *Intel Corp. v. VIA Techs.*, 319 F.3d 1357, 1367 (Fed. Cir. 2003) (“Whether the specification adequately sets forth structure corresponding to the claimed functions must be considered from the perspective of one skilled in the art”). Here, the specification sufficiently links the claimed “receiving,” “comparing,” and “setting up” functions with a “mobile terminal” structure. See ’872 Patent at 3:19-21 (“A terminal (FIG. 1, ‘terminal’) registers in a mobile radio network and obtains a network identifier (‘MCC1/MNC1’) of the

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<sup>5</sup> Defendants also submit that corresponding structure is lacking because “[i]n an effort to preserve its claim of priority, the patentee submitted an English translation of the German application as the specification for the ’872 patent. (’872 Patent File History at 14-18, 24, 31-37.) However, this German priority application was directed to method claims, not apparatus claims. (Id. at 38-40.)” Doc. No. 138 at 6.

mobile radio network visited by it.”); see also *id.* at 1:39-44, 2:21-39, 2:51-52 (“In the case of emergency calls, the terminal can immediately set up the SIP session by means of an SIP INVITE message.”) & 3:30-42; *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1219 (Fed. Cir. 2003) (“The scope of a claim under section 112, paragraph 6 . . . must be limited to structures clearly linked or associated with the claimed function in the specification or prosecution history and equivalents of those structures.”). Here, CCE points to standards which specifically relate to mobile service, i.e. 3GPP protocols. The ’872 patent is even titled “Simplified Method for IMS Registration in the Event of Emergency Calls.” The specification may not use the term “mobile terminal” specifically, but it does refer to “the terminal...in the IMS,” which can be understood in context as pertaining to a mobile terminal. ’872 patent 2:29.

In *re Katz and Aristocrat Technologies*, both cited by Defendants, are distinguishable. Here, CCE has adequately demonstrated that a “mobile terminal” is a special-purpose structure that includes structures capable of “receiving . . .,” “comparing . . .,” and “setting up . . . .” See Royer Decl. at ¶ 47 (“Those skilled in the art would know that the claimed terminal is configured to support 3GPP protocols related to IMS, all of which are well-known, and must include the ordinary components (including a receiver, memory, IMS client, and logic) that reside in such mobile terminals.”).

Defendants’ argument that the specification fails to adequately disclose what structure “within the terminal” performs the function perhaps might pertain to enablement, but that argument does not affect the claim construction analysis as to the corresponding structure for each disputed term.

Therefore, the Court construes the disputed terms as follows:

**“receiving means for receiving a network identifier of a visited network notified to**

**the terminal when the terminal is registered in the visited network**” is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, the claimed function is **“receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network,”** and the corresponding structure is **“a mobile terminal, and equivalents thereof.”**

**“comparison means for comparing the received network identifier of the visited network with a network identifier of a home network of the terminal”** is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, the claimed function is **“comparing the received network identifier of the visited network with a network identifier of a home network of the terminal,”** and the corresponding structure is **“a mobile terminal, and equivalents thereof.”**

**“connection means for setting up the emergency call connection”** is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, the claimed function is **“setting up an emergency call connection,”** and the corresponding structure is **“a mobile terminal, and equivalents thereof.”**

**b. “receiver” (Claims 13, 17, and 18) / “comparator” (Claims 13 and 14) / “connection unit” (Claims 13 and 14)**

Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
receiver	No construction necessary. Not subject to 35 U.S.C. 112(6).	Indefinite.  This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.  Function: “receive a network identifier of a visited network notified to a terminal when the terminal is registered in the visited network”  Structure:



		no corresponding structure disclosed
<b>comparator</b>	No construction necessary. Not subject to 35 U.S.C. 112(6).	Indefinite.  This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.  Function: “compare the received network identifier of the visited network with a network identifier of a home network of the terminal”  Structure: no corresponding structure disclosed
<b>connection unit</b>	No construction necessary. Not subject to 35 U.S.C. 112(6).	Indefinite.  This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.  Function: “set up an emergency call connection”  Structure: no corresponding structure disclosed

First, Defendants argue that the disputed terms are means-plus-function terms under Williamson because they are “nonce” terms “coined to invoke the functions they are to perform in the claim.” Doc. No. 138 at 15 (citing Williamson, 792 F.3d at 1350). They argue that these terms “correspond exactly with the means-plus-function terms of claim 12,” providing “no structure beyond the function.” Id. Defendants point to an earlier ruling of this Court, in CCE v. HTC, where the Court found that the term “unit” did not “recite sufficiently definite structure”

and thus the term “designating unit” invoked § 112, ¶ 6. *Id.* at 16 (citing *HTC First Markman Order* at 30-31). Thus, Defendants conclude that the disputed terms should be treated as means-plus-function terms. Next, Defendants argue that since these terms are means-plus-function terms, they are indefinite for the same reasons that the means-plus-function terms of claim 13 are indefinite, because the ’872 patent “fails to clearly link or associate any structure or class of structures to these claim terms or their functions.” *Doc. No. 138* at 17.

CCE argues that claims 13, 14, and 18 of the ’872 patent do not “recite ‘means for’ elements” and thus differ from claim 12. *Doc. No. 142* at 12. First, CCE argues that a “receiver” is “a well-known, discrete component of the IMS-capable mobile terminal described in the specification” and that a person of ordinary skill in the art “would understand that the ’872 patent uses the term ‘receiver’ to refer to a structural component of an IMS-capable mobile terminal.” *Id.* Next, CCE argues that a “comparator” is also “a well-known component of the IMS-capable mobile terminal described in the specification” and a person skilled in the art “would understand that the term ‘comparator’ in the ’872 Patent to [sic] refers to discrete logic (e.g. an ‘if’ statement) that compares values stored in memory to determine whether they match.” *Id.* at 13. Finally, CCE argues that a person of ordinary skill in the art “would understand that the term ‘connection unit’ refers to a structural component of an IMS-capable mobile terminal, namely a SIP client.” *Id.* at 14. Thus, CCE concludes that the components recited in claims 13, 14, and 18 of the ’872 patent are “not mere ‘nonce words,’ but recite definite structure known to those skilled in the art” and therefore are not subject to 35 U.S.C. §112(6). *Id.* at 15-16.

***“receiver”***

The term “receiver” connotes a particular class of structures and therefore is not a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6. See *Royer Decl.* at ¶ 51 (“A ‘receiver’ is a

well-known, discrete component of the IMS-capable mobile terminal described in the specification, and one of ordinary skill in the art would understand that the '872 Patent uses the term 'receiver' to refer to a structural component of an IMS-capable mobile terminal.”); see also Wiley Dictionary 641 (2004) (defining “receiver” as: “A component, device, piece of equipment, or system which accepts information-bearing signals, and which can extract the meaningful information contained.”); Greenberg, 91 F.3d at 1583 (“Many devices take their names from the functions they perform. The examples are innumerable, such as ‘filter,’ ‘brake,’ ‘clamp,’ ‘screwdriver,’ or ‘lock’”); *EnOcean GmbH v. Face Int’l Corp.*, 742 F.3d 955, 959-60 (Fed. Cir. 2014) (noting “extensive evidence demonstrating that the term ‘receiver’ conveys known structure to the skilled person”). No further construction is required.

Therefore, the Court construes “**receiver**” to have its **plain meaning**.

#### **“comparator”**

CCE has brought forth evidence that “comparator” has known structural meaning in the relevant art and is therefore not a means-plus-function term. The Wiley Electrical & Electronics Engineering Dictionary defines “comparator” as “[a] circuit, device, or instrument which compares quantities.” Wiley Dictionary 129 (2004). CCE’s expert has stated that:

[O]ne skilled in the art would understand that the term “comparator” in the '872 Patent refers to basic logic circuitry that compares values stored in memory to determine whether they match (e.g., an “if x = y” statement). Such a comparator is a basic structural component of an IMS-capable mobile terminal such as described and claimed in the '872 Patent, and is essential to determine whether values, such as network identifiers, match.

Royer Decl. at ¶ 57

Thus, CCE has adequately demonstrated that “comparator” has known structural meaning in the relevant art and, as such, is not a means-plus-function term. No further construction is necessary.

The Court construes “**comparator**” to have its **plain meaning**.

***“connection unit”***

In CCE v. HTC, the Court found that the term “designating unit” is a means-plus-function term. HTC First Markman Order at 30-31. Here, the term “connection unit” also uses the word “unit” and is analogous to “designating unit” in the previous case. It is true that a preceding modifier can impart structural meaning to what would otherwise be a non-structural word. Williamson, 792 F.3d at 1350-51. However, in this case, the word “connection” does not impart any structural meaning. Plaintiff’s expert opines that “one of ordinary skill in the art would understand that the term ‘connection unit’ in the claims of the ’872 Patent refers to a structural component of an IMS-capable mobile terminal, namely, a SIP client.” Royer Decl. at ¶ 63. This is not persuasive. The word “connection,” as used here, does not impart any structural meaning and thus the term “connection unit” is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6.

For the same reasons set forth above as to the term “connection means for setting up the emergency call connection,” the corresponding structure for “connection unit” is a mobile terminal.

**“connection unit”** is a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, the claimed function is **“set up an emergency call connection,”** and the corresponding structure is **“a mobile terminal, and equivalents thereof.”**

**CONCLUSION**

For the foregoing reasons, the Court hereby **ADOPTS** the above claim constructions for the patents-in-suit. For ease of reference, the Court’s claim interpretations are set forth in a table in Appendix A.

So ORDERED and SIGNED this 29th day of March, 2016.

  
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K. NICOLE MITCHELL  
UNITED STATES MAGISTRATE JUDGE

**APPENDIX A**

<b>Terms, Phrases, or Clauses</b>	<b>Court's Construction</b>
'8923 "controlling entity"	<p>Construed under 35 U.S.C. § 112(f)</p> <p>Function:  "controlling . . . whether the application program behaves in a predetermined manner in the communication terminal"</p> <p>Structure:  "trusted entity 212, which must be separate from the diverting unit (in Claim 24) or the component that performs the diverting step (in Claim 1)"</p>
'820 "monitoring a usage of a plurality of buffers"	Plain meaning
'820 "network device"	Plain meaning
'786 "self-decodable"	"decodable by itself"
'786 "self decodable rate matching pattern"	"a rate matching pattern that produces self-decodable information"
'872 "receiving means for receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network"	<p>Construed under 35 U.S.C. § 112(f)</p> <p>Function (agreed):  "receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network"</p> <p>Structure:  "a mobile terminal, and equivalents thereof"</p>
'872 "comparison means for comparing the received network identifier of the visited network with a network identifier of a home network of the terminal"	<p>Construed under 35 U.S.C. § 112(f)</p> <p>Function (agreed):  "comparing the received network identifier of the visited network with a network identifier of a home network of the terminal"</p> <p>Structure:  "a mobile terminal, and equivalents thereof"</p>

<p>'872 "connection means for setting up the emergency call connection"</p>	<p>Construed under 35 U.S.C. § 112(f)</p> <p>Function (agreed):  "setting up an emergency call connection"</p> <p>Structure:  "a mobile terminal, and equivalents thereof"</p>
<p>'872 "receiver"</p>	<p>Plain meaning</p>
<p>'872 "comparator"</p>	<p>Plain meaning</p>
<p>'872 "connection unit"</p>	<p>Construed under 35 U.S.C. § 112(f)</p> <p>Function:  "set up an emergency call connection"</p> <p>Structure:  "a mobile terminal, and equivalents thereof"</p>