

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND
SOUTHERN DIVISION

TECHNOLOGY PATENTS LLC,
Plaintiff,
v.
DEUTSCHE TELEKOM AG, et al.,
Defendants.
Civil Action No. AW-07-3012

MEMORANDUM OPINION

Pending before the Court is the parties' Joint Claim Construction Statement (Doc. No. 1278). Plaintiff Technology Patents LLC ("Technology Patents") filed this action against 131 domestic and international telecommunications companies, alleging infringement of the claim of Plaintiff's U.S. Patent No. RE39,870 ("the '870 Patent") and U.S. Patent No. 6,646,542 ("the '542 Patent"). Defendants AT&T Mobility LLC, Microsoft Corporation, Yahoo! Inc., Sprint Nextel Corporation, Motorola, Inc., Palm, Inc., Samsung Electronics Co., LTD., Samsung Telecommunications America LLP, LG Electronics Mobilecomm U.S.A., Inc., Helio, LLC, Clickatell (PTY) LTD., Cellco Partnership, and T-Mobile USA, Inc. remain. Plaintiff claims that Defendants infringed thirty-four claims of the '870 Patent—Claims 4 through 37, and Claim 39. The parties request that the Court construe seventy-three terms from these claims, and have fully briefed the related issues.1 (Doc. No. 1278.) Also pending before the Court are Plaintiff's Motion to Seal Certain Exhibits to Plaintiff's Opening Brief on Claim Construction (Doc. No. 1293),

1 The Court understands that the complexity of this case may have prevented the parties from agreeing on constructions of many of the terms, however, the Court had hoped that the parties would be able to reduce the number of terms in dispute. The Court observes that several federal district courts have Local Rules that suggest that parties submit no more than ten terms to the court for claim construction. See, e.g., LR 16.6, D. Mass.; Local Patent Rules, W.D.Wash.

Plaintiff's Motion to Strike Defendants' Post-Hearing Filings on Claim Construction, or in the Alternative Request for Leave to File a Response (Doc. No. 1387), as well as five motions for summary judgment with related motions to seal, and a Motion for Reconsideration (Doc. No. 1401). The Court will address all motions related to claim construction (Doc. Nos. 1278, 1293 & 1387) in this Memorandum Opinion, and will address the other motions in a future opinion. On December 15, 2009, the Court conducted a hearing on claim construction. The Court has reviewed the entire record, as well as the Pleadings and Exhibits, with respect to claim construction.

BACKGROUND

On October 9, 2007, the United States Patent and Trademark Office (USPTO) reissued a patent for a "global paging system using packet-switched digital data network and remote country designation" to Technology Patents as the '870 Patent. The invention was for a "global paging system utilizing land-based packet-switched digital data network (e.g. the Internet) and a feature for permitting subscribers to remotely designate countries in which they are, or expect to be, located."² ('870 Patent, Ex. A to Pl.'s Open Br. Claim Constr. [hereinafter Pl.'s Open. Br.] at 1:19-24.) The '870 Patent provides that it was designed to satisfy a need for a "more efficient global paging system." (*Id.* at 2: 33-35.) At the time the system in the '870 Patent was designed, three other types of global paging systems existed—1) geographic-area selective satellite-based paging system and corresponding method, 2) systems for providing communications based on geographic location, and 3) wide area paging systems. (*See id.* at 1:32-34, 56-57, 63-66.) The '870 Patent asserts that these inventions did not fulfill the need for a

² Technology Patents first patented this technology on November 1, 2005, as United States Patent No. 6,960,983, as a continuation of United States Patent No. 6,646,542 which was filed on November 19, 1996.

cheap and efficient global paging system that allowed receiving users to “remotely input country designations in which they [were] to be paged.” (*Id.* at 2:33-35.)

The ‘870 Patent solved this problem by claiming a system which allows for paging of the receiving user (“RU”) in countries where the RU “may be located,” as per a list input by the RU. (*See, e.g., id.* at 10:14-20.) A general description of the system follows. The RU must set up a list of countries that “he or she wishes to be reachable in by way of the paging system,” and these are the only countries where the RU can be paged. (*Id.* at 6:22-24.) When traveling, the RU may designate the country where he or she is located. (*Id.* at 6:29-50.) To contact the RU, the originating user (“OU”) contacts the “paging gateway” through the public-switched telephone network (“PSTN”) or email and inputs the RU’s “pager ID” along with a “paging message.” (*Id.* at 3:54-57.) The system then checks for the RU’s country designation, and pages the RU in that country, if access is possible. (*Id.* at 5:23-30.) If the RU’s pager cannot be accessed in the designated area, or if the RU has not designated a country, the originating server retrieves the previously input country list, attempts to page the RU at the first country on the list, and if unsuccessful, proceeds to attempt to page the RU at the second country on the list, and if unsuccessful, continues through the list, a certain number of times. (*Id.* at 5:53-60, Col. 8:13-20) Once the system reaches the RU, a website or server transmits the message through a land-based digital data network (e.g. the Internet) to the RU’s device. (*Id.* at 5:53-64.)

On November 8, 2007, Plaintiff brought suit against 131 domestic and foreign companies in the cellular phone industry claiming infringement of the ‘870 Patent and the ‘542 Patent. The Court dismissed the 118 foreign Defendants for lack of personal jurisdiction and Plaintiff dropped its allegations regarding the ‘542 Patent. Remaining are Plaintiff’s accusations of infringement of Claims 4 through 37 and Claim 39 of the ‘870 Patent. The parties have

submitted seventy-three terms in the '870 Patent for claim construction and have agreed to divide the terms into fourteen groupings (Doc. No. 1385), which the Court will use to facilitate claim construction.³ Where the parties were unable to agree on the title for a term grouping, the Court selected a title. When possible, the Court has defined a single example term as a proxy for the definitions of all of the individual terms in the grouping. Each individual term is defined in the Table of Construed Terms following this Memorandum Opinion.

STANDARD OF REVIEW

Claim construction is decided by the Court as a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd* 517 U.S. 370 (1996). “The duty of the trial judge is to determine the meaning of the claims at issue, and to instruct the jury accordingly.” *Exxon Chem. Patents, Inc. v. Lubrizoil Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995) (citations omitted), *cert. denied*, 518 U.S. 1020 (1996). In order to determine the meaning of a claim term, the Court should first look to the plain language of the claim and presume it carries its “ordinary and customary meaning.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002); *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The ordinary and customary meaning is defined as the meaning of the claim term to a person having ordinary skill in the art at the date the patent application in question was filed. *See Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In order to ascertain the ordinary and customary meaning of a disputed claim term, the claims themselves must be thoroughly examined. If a claim term is used more than once throughout the patent, the “usage of a term in one claim can often illuminate the meaning of the

³ The Court will grant Plaintiff’s unopposed Motion to Seal Certain Exhibits to Plaintiff’s Opening Brief on Claim Construction (Doc. No. 1293) as Plaintiff has provided a reasonable basis for this Motion. Defendants filed a four-page Addendum to the Joint Grouping Structure (Doc. No. 1386), which Plaintiff moved to strike (Doc. No 1387), as a superfluous filing that was not requested by the Court. The Court agrees with Plaintiff that this Addendum was unnecessary, and as such, the Court will grant Plaintiff’s Motion to Strike this filing.

same term in other claims.” *Markman*, 52 F.3d at 978. “Differences among the claims can also be a useful guide in understanding the meaning of particular claim terms.” *Id.* Further, the language that introduces the body of a claim can offer insight into the claims’ meaning. *See Gillette Co. v. Energizer Holdings, Inc.*, 405 F. 3d 1367, 1371 (Fed. Cir. 2005). For example, “the word ‘comprising’ transitioning from the preamble to the body signals that the entire claim is presumptively open-ended.” *See id.* (citing *Crystal Semiconductor Corp. v. TriTech Microelectronics Int’l, Inc.*, 246 F.3d 1336, 1347 (Fed. Cir. 2001)). Also, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Phillips*, 415 F.3d at 1315.

If a term’s ordinary and customary meaning cannot be determined from the plain language of the claim alone, it is proper for the Court to look to the Patent’s specification to determine the “true intent and meaning of the language in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878); *see also Phillips*, 415 F.3d at 1316. The specification, in conjunction with the prosecution history and the prior art cited during the patent prosecution serve as intrinsic evidence and can be used to ascertain the meaning of the disputed claim terms. *Phillips*, 415 F.3d at 1319-24. “The claims, of course, do not stand alone. Rather, they are part of ‘a fully integrated written instrument,’ consisting principally of a specification that concludes with the claims. For that reason, claims ‘must be read in view of the specification, of which they are a part.’” *Phillips*, 415 F.3d at 1315 (quoting *Markman*, 52 F.3d at 978). Preferred embodiments in the specification reflect the inventor’s desired use for his or her patent and thus can assist in the Court’s determination of the claim’s scope. Additionally, it is improper to read limitations from the specification into the claims unless the specification makes consistent and repeated

statements leading to the “inescapable conclusion” that a limitation stated only in the specification should apply to the claimed invention. *See Phillips*, 415 F.3d at 1323.

Dictionaries, expert testimony, and documents or prior art not part of the prosecution history are considered extrinsic evidence and the Court may use them to determine the true meaning of a claim term, however, the Court will give less weight to this extrinsic evidence than to intrinsic evidence. *Id.* It is not necessarily important in which order the Court consults these references; what matters is that the Court gives the consulted sources the appropriate weight. *Id.* at 1324 (citing *Vitronics*, 90 F.3d at 1582).

ASSERTED CLAIMS

The terms to be construed include both non-means-plus-function terms, addressed in Section I, and means-plus-function terms, which are subject to construction under 35 U.S.C. § 112, addressed in Section II. The Court first addresses the non-means-plus-function terms: 1) “paging” terms, 2) “designating” terms and “country data” terms, 3) “initiating paging operations in another country in a predetermined order,” 4) “another country,” 5) “originating country” and “receiving country,” 6) “computer” terms, 7) “the Internet,” 8) “website”; and second the means-plus-function terms: 9) means-plus-function terms allegedly invalid re alleged lack of structure/algorithm, 10) means-plus-function terms allegedly invalid re conditional/ambiguity, 11) other means-plus-function terms, 12) alleged invalidity re mixing, 13) additional alleged invalidity, and 14) terms whose meanings are no longer disputed. Regarding 1) “paging” terms, the Court adopts Plaintiff’s proposed construction; for 2) “designating” terms the Court adopts Defendants’ proposed construction and for “country data” terms adopts Plaintiff’s proposed construction; regarding 3) “initiating paging operations in another country in a predetermined order,” the Court adopts a combination of the parties’ proposed constructions; 4) the Court

adopts Plaintiff's proposed construction of "another country" in Claim 19, 21, and 36, and Defendants' proposed construction in Claims 4, 6, 9, 13, 16, 18, 30, and 34; 5) the Court adopts a combination of the parties' proposed constructions of "originating country" and "receiving country"; 6) The Court adopts Plaintiff's proposed construction for "computer" terms in Claim 27 and Defendants' proposed construction in Claim 34; 7) the Court adopts Plaintiff's proposed construction of "the Internet"; and 8) the Court adopts a combination of Plaintiff's and Defendants' proposed constructions of "website." Regarding the means-plus-function terms, 9) the Court finds the means-plus-function terms allegedly invalid re alleged lack of structure/algorithm valid where either a server or packet-switched digital data network is a corresponding structure. Nor does the Court find the claims where 10) means-plus-function terms allegedly invalid re conditional/ambiguity, as Defendants have not met their burden of showing indefiniteness by clear and convincing evidence; 11) the Court does not find any other means-plus-function terms to be invalid; 12) the Court does not find any invalidity re mixing; 13) the Court does not find additional alleged invalidity, and 14) the Court merely notes that some terms' meanings are no longer disputed.

I. Non-Means-Plus-Function Terms

1. "Paging" Terms⁴

Found in Claims: 1, 4, 6, 9, 11, 13, 16, 18, 19, 21, 23, 26, 27, 30, 31, 34, 35, 36, 39

E.g., "paging system" and "system for paging"

Plaintiff's Proposed Construction: a system for routing messages to be sent to handheld portable electronic devices for receiving messages

Defendant's Proposed Construction: a system for sending messages to pagers, which are handheld portable devices, other than cellular telephones, for receiving messages

⁴ Plaintiff's Terms 1-1E; Defendants' Terms 4.1-4.6

Court's Construction: a system for routing messages to be sent to handheld portable electronic devices for receiving messages

The parties dispute whether the “paging” terms exclude cellular phones. In light of the intrinsic evidence of the claim’s specification and prosecution history, the Court finds that Plaintiff’s construction of the “paging terms,” which includes cellular phones, is correct.

To determine the meaning of the paging terms in the ‘870 Patent, the Court first turns to the plain language of the claims. The aforementioned terms appear in myriad claims, but despite the frequency of their use, the terms’ ordinary and customary meanings are hard to determine from a simple reading. (*See generally* ‘870 Patent, Ex. A to Defs.’ Br.; Ex. 2 to Pl.’s Open. Br.) Plaintiff argues that since the ‘870 Patent contains no language excluding cellular phones, the plain language does not support the exclusion of cellular phones. (*See* Pl.’s Open. Br. at 5.) Further, Plaintiff argues that since the preambles to the claims in question end with “comprising,” (*See, e.g.,* ‘870 Patent, Ex. 2 to Pl.’s Open. Br. at 10:2) the claims are open-ended and are not limited to pagers. (*See* Pl.’s Open. Br. at 5.) Defendants argue that the Patent contains no language including cellular phones and that a person having ordinary skill in the art would understand that the “paging” terms include only simple pagers. (Defs.’ Br. Supp. Claim Constr. [hereinafter Defs.’ Br.] at 38-39.) Given the Court’s posture of reluctance to place limitations on claims without a clear showing of the intended limitation, however, Plaintiff’s arguments are slightly more persuasive. *See, e.g., Phillips*, 415 F.3d at 1323 (holding that people of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments). The Court believes that neither plain language argument is persuasive enough to control the determination of the ordinary and customary meaning of the “paging terms,” however.

Since the Court cannot construe the claims solely by examining their plain language, the Court must look to the intrinsic and extrinsic evidence for clarification, giving more weight to the intrinsic evidence. Plaintiff argues that the '870 Patent includes the use of a cellular phone within the specification, as the Patent provides, “[a]ccording to alternative embodiments of this invention, cellular phones may be used instead of pagers.” ('870 Patent, Ex. 2 to Pl.’s Open. Br. at 4:40-45.) Defendants argue that the specification distinguishes pagers from cellular phones through language such as, “cell phone information is transmitted as opposed to paging information.” ('870 Patent, Ex. A to Defs.’ Br. at 9:8-10.)

Although the Defendants have pointed to language where the '870 Patent distinguishes pagers from cellular phones, the Court does not believe that this distinction indicates that “paging terms” should be construed to exclude cellular phones. The underlying logic of the Defendants’ argument is that if pagers and cellular phones are distinguishable they must operate on separate systems. But, the prior art and extrinsic evidence reveal pager/cellular phone combinations, and cellular phones with pager functions which enable a cellular phone to function on a “paging system,” thus negating Defendants’ assertion. (*See* '452 Patent, Ex. 3 to Pl.’s Open. Br. at 3:45-50; Verizon Dep. Ex. 12 to Pl.’s Open. Br. at 111- 113; Nextel i500plus User Guide Ex. 9 to Pl.’s Open. Br. at TP00014314.) Additionally, the '870 Patent discloses the use of a cellular phone, and per *Phillips*, a claim should not be construed to exclude a preferred embodiment. 415 F.3d at 1316. (Ex 1. to Pl.’s Open. Br. at 1:27-31.)

Next, both parties argue that the '452 Patent, which is listed in the specification and thus considered prior art, supports their construction of the “paging” terms. The '452 patent states, in relevant part, that “the second communication path could, alternatively, be a cellular telephone system . . . [where the] pager would be combined with a cellular handset.” ('452 Patent, Ex. H to

Defs.’ Br. at 3:44-49.) Defendant argues that this language indicates a distinction between pagers and cellular phones. The Court agrees. The Court observes, however, that the ‘452 Patent also reveals that cellular phones can contain a pager component or the capability of paging. The ‘452 Patent clearly reveals a method of sending paging messages to a cellular phone and does not exclude cellular phones from receiving pages as Defendants suggest. Thus, the Court finds that the ‘452 Patent in fact lends further support to Plaintiff’s construction, which includes cellular phones in the “paging” terms.

The Court also finds support, albeit minimal, for the inclusion of cellular phones in the claims’ scope on the basis that a pager ID has been shown to be a phone number. Plaintiff argues that the prosecution history’s stipulation that a pager ID can be a phone number shows that cellular phones may be used in conjunction with a paging system. (*See* Pl.’s Open. Br. at 7; Prosecution History, Ex. 4 to Pl.’s Open. Br. at TP00000185-86.) The Court believes this argument is attenuated, though somewhat persuasive.

The Court is ultimately unpersuaded by Defendants’ argument that since the prosecution history shows Plaintiff chose to classify the ‘870 Patent as a “paging system” when forced to choose between a “paging system” and a “cellular phone system,” the “paging” terms should exclude cellular phones. (*See* Defs.’ Br. at 40; Prosecution History, Ex. B to Defs.’ Br. at TP00000267.) Although Defendants make a very compelling argument, a careful examination of the prosecution history reveals that the choice Plaintiff made did not actually exclude cellular phones from the ‘870 Patent. Plaintiff chose to classify its invention as a “method of receiving paging messages in a paging system” instead of “a cellular phone system where the originating user and receiving user carry on a telephone conversation.” (Prosecution History, Ex. B to Defs.’ Br. at TP00000267.) The prosecution history also states that Plaintiff chose an invention

concerning one-way message transmission, instead of “two way interactive conversation.” (*Id.*) This distinction merely eliminates two-way phone conversation, not one-way messaging to cellular phones.

The Court finds the intrinsic evidence strongly favors inclusion of the cellular phones in “paging” terms in the ‘870 Patent, and the extrinsic evidence both parties present in the form of expert testimony, dictionary excerpts, phone manuals, and other documents not involved in the prosecution history does not convince the Court otherwise. Although Defendants’ extrinsic evidence is ultimately more persuasive than Plaintiff’s extrinsic evidence, this evidence is not strong enough to overcome the intrinsic evidence favoring Plaintiff’s proposed construction. *See Phillips*, 415 F. 3d at 1324 (citing *Vitronics*, 90 F.3d at 1582). Both Plaintiff and Defendants have shown dictionary definitions supporting their positions, and in any case, the Federal Circuit’s decision in *Phillips* requires the Court to give dictionaries less weight than intrinsic evidence. *See id.* Next, although expert testimony can be helpful in enabling the Court to determine the view of a person having ordinary skill in the art, the experts have conflicting opinions on this matter. Dr. Wicker’s testimony fails to provide enough support to overcome the intrinsic evidence favoring Plaintiff’s claim construction. Defendants’ argument that the Court should disregard current phone manuals and deposition testimony regarding present-day cellular phone technology is compelling, as the Court must determine the meaning of the claim to a person having ordinary skill in the art *at the time of the invention*, rather than today. But, as this evidence is not essential to Plaintiff’s argument, which is thoroughly supported by intrinsic evidence, the Court adopts Plaintiff’s proposed construction of the “paging” terms.

2. “Designating” Terms, Country Data Terms, and the “When” Term

Found in Claims: 4, 9, 11, 16, 17, 19, 21, 26, 27, 30, 36, 31, 34⁵

⁵ Plaintiff’s Terms 4 and 5-5H; Defendants’ Terms 1.1-15 and 23.3-2.7

E.g., Claim 19: “designating a page receiving country, from a plurality of potential countries, in which a receiving user is to be paged.”

Plaintiff’s Proposed Construction: specifying a page receiving country from a plurality of countries, as the country in which the receiving user is to be paged

Defendants’ Proposed Construction: the originating user inputting a selection of a page receiving country, other than a country code, to be used by the system as the country in which to page the receiving user.

Court’s Construction: inputting a selection of a page-receiving country, from a plurality of potential countries, to be used by the system as the country in which to page the receiving user.⁶

The parties dispute whether “designating” means “specifying” a country from the RU’s stored list of countries, as Plaintiff proposes, or if “designating” means “inputting” the selection of a country, as proposed by Defendants. (Pl.’s Open. Br. at 16; Defs.’ Br. at 11-12.) This dispute essentially turns on whether the claims require either the OU or RU to perform the designation, as Defendants argue, or whether the system can separately effect the designation, as Plaintiff argues. The parties also dispute whether country codes should be excluded from this term’s construction. (Pl.’s Open. Br. at 16; Defs.’ Br. at 11-12.) Additionally, the parties disagree on which countries may be designated, and what “when” means. The Court finds that intrinsic evidence favors Defendants’ proposed construction of “designating” as “inputting,” but that the claim does not exclude use of a country code for selecting a country

A. “Designating”

The Court construes the “designating” terms to have the more narrow definition that Defendants suggest, of “inputting,” because the specification clearly requires the more narrow definition. The meaning of the terms is not completely clear from the plain language of the

⁶ The Court is unaware of a reason for excluding the proviso, “from a plurality of potential countries” from the construction of this claim. Whether the designation is made by the OU or the system, the selection is made from a plurality of countries.

claims, but Defendants' arguments regarding the plain language are more persuasive.

Defendants construe "designate" to mean "input a selection . . . other than a country code." They argue that this construction comports with ordinary usage of "designate" because it is used in terms such as "designated driver" or "designated hitter" to mean "selecting for a purpose." (Defs.' Br. at 12.) Defendants observe that the claims require the user to input the country designation, not that the system specify the designation. Many of the claims use "designating" and "inputting" interchangeably, and thus, "designating" should be construed as "inputting," according to Defendants. (*See, e.g.*, '870 Patent, Ex. A to Defs.' Br. at 12:20-41.) Additionally, Defendants argue that the plain language requires a selection from a plurality of countries, which they contend supports a construction of "designating" as "inputting," since it more accurately reflects selection than Plaintiff's proposed construction. Next, Defendants note that the preambles of Claims 4 and 36 recite "a system for [or method of] paging a receiving user in a country-*selective* paging system" which additionally supports defining "designating" as "inputting." (Defs.' Br. at 12.)

Plaintiff's argument that "inputting" is an incorrect construction because "inputting" does not appear in Claim 4 (Pl.'s Open. Br. at 16), is misleading because it does not take into account the entirety of the claims, and thus is contrary to the established approach for construing claims. *See, e.g., Markman*, 52 F.3d at 978 ("Usage of a term in one claim can often illuminate the meaning of the same term in other claims."). Although "input" is not present in Claim 4, it is present in other claims of the '870 Patent, as Defendants argue. (*See* '870 Patent, Ex. 2 to Pl.'s Open Br. at 12, l.40.) Nonetheless, there is a conflict in the claims since Claim 4 provides no support for limiting "designating" to inputting, while Claim 19 supports this limitation. ('870 Patent, Ex. 2 to Pl.'s Open. Br. at Claims 4 & 19.) With such ambiguity in the claims, it is

appropriate for the Court to look to other evidence to decipher the ordinary and customary meaning of the “designating” terms.

The specification clearly supports construing “designating” as “inputting.” Defendants point to three places in the specification where they believe “designate” and “input” have been used interchangeably. (*See, e.g.*, Ex. A to Defs.’ Br. at 6:62-66 (“input or designate Australia as a ‘designated country’”) (emphasis added).) The Court is unpersuaded by Plaintiff’s position that where the specification states “input or designate,” it refers to “designate” and “input” as alternatives, rather than interchangeable terms and that inputting is merely a method of designating. Indeed, according to Plaintiff’s own argument, “inputting” is *one form of* “designating,” or an alternative to renewing and to automatically designating. If Plaintiff’s position were correct, then the specification should state “input or renew” or “input or automatically designate,” not “input or designate.”

Nor is the Court convinced by Plaintiff’s argument that the specification provides that designation can also occur by renewal of a designation (*Id.* at 7:10-14) or by automatic designation (*Id.* at 8:31-34, 7:39-40), and that these designations do not require “inputting” a country, and thus, limiting “designating” to “inputting” would exclude these preferred embodiments. Plaintiff contends that limiting “designating” to inputting a selection excludes the embodiments that allow for renewing a designation or designating a country automatically. Plaintiff argues that automatic selection does not require an input step because the country has already been input. But Plaintiff’s reliance on the ‘870 Patent’s description of automatic or renewal designations ignores the crucial fact that automatic or renewal designations occur only after a RU or OU designates a country. (*See* Ex. A to Defs.’ Br. at 7:39-40, 8:31-34.) Accordingly, the specification weighs in favor of the Defendants’ proposed construction.

Moreover, though Plaintiff cites five dictionary definitions of “designate” in support of defining “designating” as “specifying,” (Pl.’s Open. Br. at 17-18) “specifying” does not appear in the specification. (Defs.’ Br. at 14.) Plaintiff argues that these dictionary definitions of “designate” as “to mark, to point out, to indicate, to specify, and to stipulate” (*See, e.g., Webster’s Illustrated Dictionary*, Ex. 17 to Pl.’s Open. Br. at 5) show that the ordinary meaning of “designate” is to specify, point out, or indicate. (Pl.’s Open. Br. at 17.) Defendants point to *The American Heritage Dictionary*, which defines “to designate” as “to select and set aside for a duty, an office, or a purpose.” (Defs.’ Br. at 14.) “Dictionaries . . . are often useful to assist in understanding the commonly understood meaning of words and have been used by [the Federal Circuit] and the Supreme Court in claim interpretation.” *Phillips*, 415 F.3d at 1322. It is clear that both “select” and “specify” are common definitions of “designate.” However, the Federal Circuit has warned against relying too much on dictionary definitions because it “focus[es] the inquiry on the abstract meaning of the words rather than on the meaning of the claim terms within the context of the patent.” *Id.* at 1321. Although the dictionaries seem to weigh heavily in favor of Plaintiff’s proposed construction, they do not provide the correct definition for the terms as used in the claim. Accordingly the Court will not weigh this extrinsic evidence heavily.

Finally, Defendants argue that the “designating” terms require that a user designate a country “in which the receiving user is to be paged.” (Defs.’ Br. at 18.) There is no apparent conflict between Defendants’ construction, “[a country] to be used by the system as the country in which to page the receiving user,” and Plaintiff’s construction, “the country in which the receiving user is to be paged”. (*See* Defs.’ Br. at Appx. A at 1.) Defendants are correct that designating a second country serves no purpose other than to allow the system to use the designated country as the country in which to page the receiving user. (*See* Defs.’ Br. at 18.) As

such, Defendants' construction of "input," which insinuates that the user is performing the "designation," is correct.

B. Country Data

There is no language in the claims suggesting that country codes must be excluded from data that may be input to designate a country, and thus the Court construes the country data terms to include country codes. Although "other than a country code" does not appear within the claims, Defendants argue that this limitation is implied by the claims, the written description, and the prosecution history. Defendants also argue that the patentee adopted the "other than a country code" limitation in the written description because the patentee emphasized that "designating" does not include inputting a telephone number. Plaintiff argues that this limitation is neither apparent nor implied. The Court agrees with Plaintiff.

Defendants first argue that the claims exclude the mere act of inputting a telephone number to designate a page receiving country because the "designating" limitation is claimed separately from limitations relating to inputting the pager ID, and that thus country codes are also excluded. (Defs.' Br. at 15.) Defendants also argue that the express requirement in certain claims that the designation be "from a plurality of potential countries" also supports the "other than a country code" limitation because entering a country code of a phone number requires a user to enter a single country, and not a choice from a plurality of potential countries. (Defs.' Br. at 18.) Plaintiff argues that since the claims do not contain any language that would exclude country codes, they should not be excluded. (Pl.'s Open. Br. at 16.) The Court agrees with Plaintiff that absent any indication in the plain language of the claim that country codes are to be excluded, the Court does not find the distinction between pager ID and the "designating"

limitation sufficient to imply that the patentee intended to exclude country codes as country designators.

The Court finds the construction clear from the plain language of the claim, and will thus only briefly address the parties' arguments with reference to the specification and prosecution history. Regarding the specification, Defendants argue that the Patent distinguishes between entering the pager ID and designating a second country. (*See, e.g.*, '870 Patent, Ex. A to Defs.' Br. at 2:61-67.) In response, Plaintiff contends that "the pager ID identified in the specification at col. 4:60 does *not* have a country code, indicating that the country code and device ID can be referred to differently." (Pl.'s Reply Br. at 12.) Plaintiff also argues that nothing in the specification excludes country codes, but instead the specification describes "country data" as being indicative of a country, and expressly mentions a country code at Column 2:12-14 and a country code is shown at Column 4:52-53. (Pl.'s Open Br. at 17; Pl.'s Reply Br. at 11.) The Court finds Plaintiff's arguments more persuasive.

Defendants also argue that the specification's distinction between the step of entering the pager ID and the step of designating the page receiving country was restated during prosecution of the Patent to overcome rejection. (Appeal Br., 1/28/99, Ex. B to Defs.' Br. at TP000301.) Plaintiff responds that during prosecution of the parent of the Reissued '870 Patent, three Administrative Patent Judges (APJs) found that "designating means *is met by the country code.*" (Pl.'s Open. Br. at 18 (citing '870 Prosecution History Ex. 4 to Pl.'s Open. Br. at TP 344).) Furthermore, during prosecution of the '870 Patent, the Examiner stated that country codes were used for designating countries in prior art. (*See* Pl.'s Open. Br. at 18 (citing '870 Prosecution History Ex. 4 TP149, 152-53).) Finally, when resolving an obviousness dispute, the Board of Patent Appeals and Interferences ("Board") explained that the '870 Patent was not

obvious because it suggests entering the location for a call even if the pager ID number included a country code, and this had never been taught or suggested before. (‘870 Prosecution History, Ex. B to Defs.’ Br. at TP 339-340.) The Court believes the prosecution history merely distinguishes the ‘870 Patent from the prior art on the basis of its being a *global* paging system, not a local one; there is no suggestion country codes cannot be used to designate a country.

Nor does examination of the prior art favor Defendants’ construction, though Defendants argue that the patentee specifically excluded country codes from the “designating” step when the patentee distinguished its invention from the ‘779 patent (“Gaskill”).⁷ The ‘870 Patent, distinguishes the present invention from Gaskill on the basis that the Gaskill approach fails to allow a user to “input into the system designated country locations where he or she expects to be in the future.” (‘870 Patent, Ex. A to Defs.’ Br. at 2.:21-25.) Defendants interpret this statement to indicate that the patentee admits that “designation” in the ‘870 Patent “[does] not refer to the prior art use of telephone numbers.” (Defs.’ Br. at 16.) Plaintiff responds that in fact, the specification states that Gaskill “is lacking for at least the following reasons: (i) other than the roaming feature, the receiving user cannot input into the system designated country locations where he or she expects to be in the future.” (‘870 Patent Ex. 2 to Pl.’s Br. at 2:21-25.) Plaintiff contends that the “other than the roaming feature” language indicates that a country code can be used by a receiving user to designate a country when roaming. The Court believes that the key difference between the ‘870 Patent and the Gaskill Patent is the ability to designate, not the method by which the country is designated. The ‘870 Patent allows users to designate where they plan to be in the future, instead of merely depending on roaming features to deliver their calls.

⁷ Gaskill discloses a similar system in which a receiving user enters a telephone number to allow the system to know where to send the RU’s messages.

As such, it appears Defendants' argument is flawed and the prior art does not provide a basis for excluding designation by country codes.

C. The "When" Term

E.g., Claim 4: "*when* the paging system determines that the second country has not been designated by the receiving the receiving user"

Plaintiff's Proposed Construction: in the event that . . .

Defendants' Proposed Construction: at the time that . . .

Court's Construction: in the event that . . .

The Court construes "when" to mean "in the event that." "When" is repeatedly used in the claims to signify an event happening *after* an initial event. A simple reading of the claims shows that many of the steps for the '870 Patent can only happen after a certain step has been completed, or at a minimum attempted, and thus the Court will adopt Plaintiff's construction. The Court agrees. The Court is unpersuaded by Defendants' argument that the '870 Patent uses "if" when it intends "in the event that" and it uses "when" to connect two actions that occur during the paging process. (Defs.' Br. at 31-32.) Plaintiff convincingly demonstrates that a plain reading of Claim 4 shows that the functions following "'when' in [Plaintiff's] Terms 5B and 12A occur *after* the system determines if the second country is currently designated." (Pl.'s Open. Br. at 19.) Thus the Court adopts Plaintiff's construction of "when."

3. "Initiating Paging Operations in Another Country in a Predetermined Order"

Found in Claims: 4, 9, 13, 16, 30, 34, 36⁸

E.g., Claim 4: "initiates paging operations in another country in a predetermined order in an attempt to page the receiving user"

Plaintiff's Proposed Construction: begins paging operations in another country in an order determined before the operations begin in an attempt to page the receiving user

⁸ Plaintiff's Terms 6 and 6A; Defendants' Terms 2.1 and 2.2

Defendants’ Proposed Construction: attempts to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the paging system determines whether any country has been designated

Court’s Construction: begins to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the paging system determines whether any country has been designated

The Court construes “order” to require a list of two or more countries, “initiate” to mean “begin,” and believes that the designation must occur before the determination of the designation. The Court addresses each of these words or phrases below.

A. Ordered List

Defendants argue that the term “initiates paging operations in another country in a predetermined order” refers to a “country” that is in a “predetermined order” of countries, and as such, the ordered list must be a list of two or more countries. (*Id.*) First, Defendants argue that common rules of grammar favor this interpretation because, “in a predetermined order” modifies “country,” not “paging operations” since it follows immediately after “country,” without any commas. (Defs.’ Br. at 25-26.) Defendants contend that Plaintiff was aware that it was modifying “country” because other claims unambiguously modify the claimed “paging operations.” (*See, e.g.*, ‘870 Patent Ex. A to Defs.’ Br. at Claim 6 (modifying “paging operations” with “a predetermined number of times”).) Plaintiff argues that since “another” means “one more” and “country” is by definition singular, “another country” only refers to one other country, not a list of two or more countries. (Pl.’s Open. Br. at 20.) Plaintiff supplements this argument by pointing out that none of the claims in question say anything about a “list of two or more countries.” (*Id.* at 20-21.) Further, Plaintiff argues that since dependent Claim 31 recites a “list,” it can be presumed that Claim 30 (Plaintiff’s Term 6A) does not require a list. (*Id.* at 21.)

Defendants' grammar-based argument is very persuasive. The Court is not persuaded by Plaintiff's argument that because "another country" is singular, the predetermined order must be a single country; instead it requires that one country be selected from the list. The Court agrees with Plaintiff that the fact that Claim 31, which is dependent on Claim 30, requires a list, indicates that Claim 30 does not require a list. "[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim," *Phillips*, 415 F.3d at 1315, and this provides support for the Court assuming that Claim 30 does not require a list. Plaintiff's claim differentiation argument does not prevent a limitation requiring a predetermined order to have more than one country, however. Since the claim language fails to yield an unambiguous result, it is proper to consult further evidence.

Defendants observe that the specification provides that the system will attempt to page the RU in accordance with the RU's predetermined order of countries, (*See* '870 Patent Ex. A to Defs.' Br. at 5:66-6:11), while Plaintiff argues that the specification refers to a list of countries *or* coverage areas within the same country. (*See id.* at 4:16-21.) Although the specification reveals an embodiment that includes coverage areas within a single country, the specification repeatedly states that the '870 Patent is for a system for global messaging. The claims do not mention coverage areas, but instead speak to the selection of countries, and as such, the claims' construction need not encompass the coverage area embodiment from the specification, especially in light of the support the specification lends to Defendants' position.

Defendants further argue that the prosecution history negates Plaintiff's argument regarding the specification's mention of coverage areas. After the Patent Office rejected the claim language, "list of different countries in a predetermined order," Plaintiff stated that "this

limitation clearly requires that the receiving user is attempted to be paged in one country, then in another country, then in still another country, in a predetermined order.” (‘542 Prosecution History Ex. 16 to Pl.’s Open. Br. at TP0000283.) Defendants argue that this statement shows Plaintiff has surrendered the claim that the “predetermined order” can refer to coverage areas, but Plaintiff argues that this limitation does not apply because the disputed claims were not present at the time of this limitation. (Pl.’s Reply Br. at 20.)

When analyzing the prosecution history, the court may not consult “claims that are broader than the original patent claims in a manner directly pertinent to the subject matter surrendered during prosecution.” *Revolution Eyewear, Inc. v. Aspex Eyewear, Inc.*, 563 F.3d 1358, 1368 (Fed. Cir. 2009). Also, claim limitations from a parent patent cannot be used to limit a claim not present in the parent patent. *Linear Tech. Corp. v. Int’l Trade Comm’n*, 566 F.3d 1049, 1058 (Fed. Cir. 2009). In the rejection found in the prosecution history at hand, the examiner did not rely on the word “list,” and Plaintiff did not clarify what the word “list” meant in response, so this limitation should not be excluded based on this evidence. Despite the inclusion of the word “list” in the parent patent, Plaintiff’s statement made in response to the claim rejection shows that the predetermined order was intended to be an order of multiple countries.

Overall, Defendants’ construction requiring two or more countries is preferred. The Patent specification explicitly and repeatedly calls for a global paging system and distinguishes itself from prior art on the basis that it provides a more efficient global paging system. Although the claims do not explicitly state this limitation, it can be inferred from the specification. Neither the claims nor the prosecution history strongly favor Plaintiff’s construction, and as such, the Court construes “predetermined order” terms to refer to multiple countries.

B. “Initiate”

Plaintiff argues that Defendants have failed to provide a construction that takes into account the word “initiate.” (Pl.’s Open. Br. at 20.) Plaintiff argues that “initiating” means “beginning” and as such this word cannot be ignored in favor of “attempting.” (*See* Ex. 5, 17, 18, 19, 20 to Pl.’s Open. Br. (offering dictionary definitions).) Defendants, on the other hand, fails to substantiate their choice of “attempt” instead of “initiate.” The Court thus declines to change this word from the claim language.

C. Creating the Ordered List

The ‘870 Patent specification repeatedly and clearly states that the ordered list is to be created by the RU, and as such the Court adopts Defendants’ construction regarding “creating the ordered list.” Defendants argue that “Plaintiff’s construction omits the essential requirement that the receiving user create the ordered list.” (Defs.’ Br. at 29.) Defendants point out that the specification states that the asserted invention fulfills the need for the RU to determine where the pages are sent. (Defs.’ Br. at 29-30; ‘870 Patent, Ex. A. to Defs.’ Br. at 2:32-37, 51-54.) The Court is not convinced by Plaintiff’s unsubstantiated argument that this limitation conflicts with the claim language itself since the limitation is not stated in the claims. (Pl.’s Open. Br. at 21.)

Next, Defendants argue that “pre” in “predetermined order” must be construed to mean the order is determined before the paging system determines whether the receiving country is designated. Defendants explain that, according to the Patent, the predetermined order ensures that “pages may be sent even if a receiving user has not input a particular designation into the system.” (Defs.’ Br. at 30.) Defendants suggest that the purpose of this feature would be defeated if “predetermined” was construed to mean the order must be determined before paging operations are initiated. (*Id.*) Meanwhile, Plaintiff does not offer an explanation for its

construction of when the ordered list is created. The Court does not believe there is a significant distinction between the parties' constructions with regard to when the order is determined. The Court agrees with Defendants that the designation must occur before the determination of a designation, and thus adopts Defendants' construction, in the absence of any compelling explanation by Plaintiff in support of its proposed construction.

4. "Another Country"

"Another country" in Claims 19, 21, 36⁹

Plaintiff's Proposed Construction: a country different than the page receiving country, but which may or may not be the originating country

Defendants' Proposed Construction: country other than the originating and page receiving country

Court's Construction: a country different than the page receiving country, but which may or may not be the originating country.

"Another country" in Claims 4, 6, 9, 13, 16, 18, 30, 34¹⁰

Plaintiff's Proposed Construction: a country different than the second country, but which may or may not be the first country

Defendants' Proposed Construction: country other than the first and second country

Court's Construction: country other than the first and second country

The Court believes that the "originating country" is included in "another country" in Claims 19, 21, and 36, but excluded in Claims 4, 6, 9, 13, 16, 18, 30, and 34, as documented above. Claims 19, 21, and 36 preface "another country" with "a paging message which came from," and in those claims, the "another country" can refer to the originating country. For example, Claim 21 states, "a paging message which came from another country," so there is no question that "another country" may refer to the originating country. ('870 Patent, Ex. A to

⁹ Plaintiff's Term 2; Defendants' Term 3.3

¹⁰ Plaintiff's Term 2A; Defendants' Term 3.4

Defs.' Br. at 12:60-61.) Claims 4, 6, 9, 13, 16, 18, 30, and 34 preface "another country" with "initiating paging operations in," and in those claims the "another country" refers to a page-receiving country different than the "originating country" and the initial "page receiving country." Claim 9, for example, uses "another country" in reference to "initiating paging operations in another country." (*Id.* at 11:12-13.) The Court has determined that the '870 Patent covers a global paging system, and as such, references to "another country" like those in Claim 9 require the paging system to "initiate operations" in a country other than the first page receiving country, which should be different from the originating country. This construction reflects the plain meaning of the term because the claims use different terms for "originating country," "page receiving country," and "another country." (Defs.' Br. at 35.) Specifically, Defendants point out that the claims at issue introduce the term "another country" after both "originating country" and "page receiving country." This order, Defendants posit, suggests that "another country" is different from both terms. (*Id.*) The Court agrees. In light of the plain language of the claims, the Court is unconvinced by Plaintiff's argument that Defendants' construction excludes preferred embodiments, such as Claim 21, where Plaintiff contends that "another country" refers to the "originating country." (Pl.'s Open. Br. at 11.)

Nor do Plaintiffs' arguments regarding the prosecution history persuade the Court that Plaintiff's proposed construction is correct. In the prosecution history, Plaintiff stated that the "applicant agrees with the examiner's indication on page 6 of the Office Action that the 'another country' is different than the second country, but may or may not be different than the first country." ('870 Prosecution History, Ex. 4 to Pl.'s Open. Br. at TP000209.) Defendants discredit this argument, first by explaining that the applicant made the statement "after the patent had already been allowed and the Patent Office's primary review of the application was

completed.” (Defs.’ Br. at 36.) Thus, the Patent Office did not respond to or accept the Plaintiff’s statement. *Cf. Phillips*, 415 F.3d at 1318 (holding self-serving statements made after a patent issues to be less reliable than the intrinsic record). Second, Defendants claim that “Plaintiff’s statement mischaracterized the record,” as an examination of the Examiner’s full statement reveals that the Examiner did not indicate that the receiving user’s home country “may or may not be different than the first country,” as suggested by the Plaintiff’s statement. (‘870 Prosecution History, Ex. 4 to Pl.’s Open. Br. at TP000150.) Defendants further support this argument by citing the repeated and unambiguous references to a “global system” in the prior art and urge that the construction of “another country” be made with deference to the Patent’s intended purpose. (Defs.’ Br. at 36.) The Court agrees with Defendants.

5. “Originating Country” and “Receiving Country”

“Originating country” in Claim 19, 21, and 36¹¹

Plaintiff’s Proposed Construction: country in which a page is originated

Defendants’ Proposed Construction: country other than the page receiving country

Court’s Construction: country, other than the page-receiving country, in which a page is originated

“Page receiving country” in Claims 19, 20, 21, 22, 23, 36, 38, and 39¹²

Plaintiff’s Proposed Construction: country in which a page is received

Defendants’ Proposed Construction: country other than the originating country

Court’s Construction: country, other than the originating country, in which a page is received

The claim language clearly shows that the originating country is different from the receiving country. For example Claims 19 and 21 refer to the originating country as “another

¹¹ Plaintiff’s Terms 3; Defendants’ Terms 3.1

¹² Plaintiff’s Terms 3A; Defendants’ Terms 3.2

country.” Nonetheless, Plaintiff’s first argument is valid insofar as Defendants’ proposed construction neglects the “originating” and “receiving” portions of the terms. Although, it does not appear that Defendants argue, for example, that “originating country” could mean a country, other than “page receiving country”, where a page had not originated, Defendants offer no valid justification for excluding these terms. As such, a combination of the proposed constructions best encapsulates the ordinary and customary meaning of the terms.

Plaintiff first points out that Defendants’ construction of both “originating country” and “page receiving country” fails to address the “originating” or “page receiving” portion of the terms. Plaintiff also contends that some claims do not expressly limit the method to different countries and, thus, without express limitation, the claims should encompass “both the scenario where they are different countries and the scenario where they are the same country.” (Pl.’s Reply Br. at 10.) On the other hand, Defendants posit that using the term “originating country” followed by the term “page receiving country,” without indication that they could be the same, favors an interpretation that they are different. (Defs.’ Br. at 33.) As an example, they point out that Claim 36 states that “the receiving user . . . may be located in a page receiving country different from the originating country.” (*Id.*; ‘870 Patent, Ex. A to Defs.’ Br. at Claim 36.) Further, Defendants argue that since the method of Claims 19 and 21 comprises “in a page receiving country . . . a paging message which came from another country,” the two countries must be different. (‘870 Patent, Ex. A to Defs.’ Br. at Claim 19,21.)

The specification and prosecution history do not support excluding Defendants’ constructions. Although Plaintiff maintained throughout prosecution that its invention is “a method . . . of paging a receiving user in a country-selective global paging system, in which an originating user pages the receiving user in a different country,” (Ex. B to Defs.’ Br. at TP296),

Plaintiff now suggests that if the countries can be selected from the same list, it is possible for the countries to be the same country. This argument seems self-serving and contradictory to the purpose of the invention since the specification and prosecution history both show that this invention was intended to be a global system. However, just because a system can send a paging message to a user in a different country does not preclude it from sending a paging message to a user in the same country. Despite this concern, the claim language supports Defendants' contention that the originating and receiving countries must be different, and neither the specification nor prosecution history strongly supports an opposite construction. Next, Plaintiff argues that the prosecution history confirms its construction. (Pl.'s Open. Br. at 14.) During prosecution, Plaintiff explained to the patent office that "each of the originating country and the page receiving country may be selected, for example, from the countries listed in the '983 Patent at Col. 6, lines 35-43." ('870 Prosecution History, Ex. 4 to Pl.'s Open. Br. at TP000187.) Defendants, on the other hand, point out that the abstract of the '870 Patent describes the invention as a global system "in which an originating user pages a receiving user in a different country." ('870 Patent, Ex. A to Defs.' Br. at Abstract.) Defendants further support their argument by pointing out that the specification shows the invention is intended as a "global system." (See, '870 Patent, Ex. A to Defs.' Br. at 2:56, 61-63, 3:1-4 ("[A] global paging system [that] transmit[s] paging data around the world so that subscribers . . . may be paged in different countries around the world."))

6. "Computer" Terms

Found in Claim 27: "A computer for receiving the paging message via at least a digital data network"¹³

Plaintiff's Proposed Construction: a computer for receiving the paging message from the website via at least a digital data network.

¹³ Plaintiff's Term 8, Defendants' Term 3.5

Defendants’ Proposed Construction: a computer located in a second country for receiving the paging website located in the first country via at least a digital data network.

Court’s Construction: a computer for receiving the paging message from the website via at least a digital data network

Found in Claim 34: “To cause the paging message to be sent over at least a packet-switched digital data network to a second computer”¹⁴

Plaintiff’s Proposed Construction: to cause the paging message to be sent over at least a packet switched digital data network to a second computer.

Defendants’ Proposed Construction: to cause the paging message to be sent over at least a packet-switched digital data network to a second computer located in a country.

Court’s Construction: to cause the paging message to be sent over at least a packet switched digital data network to a second computer

The claim language does not state where the receiving computer is located. (*See* ‘870 Patent, Ex. 1 to Pl.’s Open. Br. at Claims 27, 34.) Plaintiff contends that this lack of specificity allows the computers to be located anywhere (Pl.’s Open. Br. at 25, 26-27) while Defendants argue that the computer must be in a second country. (Defs.’ Br. at 37.) The Court adopts Plaintiff’s proposed construction because there is no language in the claims, or even in the specification, to suggest that the computers must be in different countries, and as such the Court cannot impose such a limitation. Claim 34 requires that “the second computer communicates with a wireless transmitter that is located in the designated second country in which the receiving user is to receive the paging message.” (‘870 Patent, Ex. A to Defs.’ Br. at 14:66-15:3.) Although this requires the transmitter to be in the second country, it does not require the computer to be in a second country unless a person having ordinary skill in the art would have understood a computer to have to be in a second country to communicate with a transmitter. Since there is no evidence that a person having ordinary skill in the art would have understood

¹⁴ Plaintiff’s Term 10, Defendants’ Term 3.6

this to be true, there is no limitation requiring the computer to be in the second country, and the Court adopts Plaintiff's construction.

7. "The Internet"

Found in Claims: 5, 14, 24, 28, 32, 35, 37¹⁵

E.g., Claim 5: "the system of claim 4, wherein the digital data network comprises the Internet."

Plaintiff's Proposed Construction: the collection of networks and gateways, spanning multiple countries, that is packet-switched and uses TCP/IP protocol

Defendant's Proposed Construction: a public, packet-switched digital data network that connects private and government computers in multiple countries according to Internet Protocol (IP)

Court's Construction: the collection of networks and gateways, spanning multiple countries, that is packet-switched and uses TCP/IP protocol

The Court construes "the Internet" to include more than solely public networks, connecting more than just "government" computers, and also construes "the Internet" to require TCP/IP protocol, as Plaintiff suggests, rather than the broader Internet Protocol (IP) Defendants recommend. The parties agree that the intrinsic evidence is not very helpful in determining the ordinary and customary meaning since the term appears without significant context. (*See* Pl.'s Open. Br. at 23; Defs.' Br. at 43.) (*See, e.g., '870 Patent, Ex. 2 to Pl.'s Open. Br. at 4:11.*)

The Federal Circuit generally opposes inserting limitations in a patent claim where none is apparent in the entirety of the patent. *See, e.g., Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1322-23 (Fed. Cir. 2003). Thus, the plain language of this Patent favors Plaintiff's construction; as the Patent does not contain any language referring to the Internet being public or involving government computers there is no reason to impose these limitations in the patent.

¹⁵ Plaintiff's Term 7, Defendants' Term 5.1

(Pl.'s Open. Br. at 23; '870 Patent, Ex 2 to Pl.'s Open. Br. 1:17-18.). This same logic favors Defendants' proposed construction which requires IP protocol rather than TCP/IP protocol. Despite the importance of plain language and intrinsic evidence, the foregoing arguments are tenuous since neither the '870 Patent nor the intrinsic evidence even attempt to define "the Internet." Consequently, it is prudent to consult the extrinsic evidence to develop a more concrete definition of "the Internet."

Both parties offer various dictionary definitions of "the Internet," deposition testimony, and Plaintiff also offers a persuasive claim construction from the federal district court for the Northern District of Illinois. Defendants argue that since their dictionary definition of "the Internet" includes both "public" and "government" in the definition, the Court should construe it as such. (Defs.' Br. at 43.) However, it is well established that disputed terms must be construed to take the ordinary and customary meaning attributed to them by those of ordinary skill in the art *at the time of the invention*. See, e.g., *Teleflex*, 299 F.3d at 1325. The only piece of extrinsic evidence weighing in favor of Defendants' construction is Defendants' expert deposition testimony which asserts that the Internet was publicly available and that no party controlled the Internet in 1996. However, Plaintiff does not contend that a single party controlled the Internet, merely that there were parts of the Internet privately owned in 1996. (Pl.'s Reply Br. at 21.) None of Plaintiff's dictionaries, which were all published before the filing date, define the Internet as a public network, nor as including government computers. Additionally, in *Civix-DDI LLC v. Cellco Partnership d/b/a Verizon Wireless*, No. 03-3792, 2005 U.S. Dist. LEXIS 43908 at *31 (N.D. Ill. Apr. 6, 2005), the court defined "the Internet" for a patent as of 1995 and did not limit the Internet to a public network with government computers. *Id.* Since the '870 Patent does not mention "government" or "public" and the extrinsic evidence all seems to

support the exclusion of these terms, it appears Plaintiff's construction is correct regarding exclusion of these two terms.

The TCP/IP dispute is a closer question. Plaintiff argues that since two of its three offered dictionaries include TCP/IP protocol in their definitions of "the Internet," its construction is correct. (Pl.'s Open. Br. at 24.) Additionally, Plaintiff cites *Civix-DDI LLC v. Cellco Partnership d/b/a Verizon Wireless*, No. 03-3792, 2005 U.S. Dist. LEXIS 43908 at *31 (N.D. Ill. Apr. 6, 2005) where the court construed the "Internet" as "a system of linked computer networks worldwide in scope, that is *typically associated with using TCP/IP as a standard protocol.*" *Id.* (emphasis added). Plaintiff argues that since Verizon Wireless, a defendant in both cases, did not oppose a construction with TCP/IP protocol in *Civix-DDI*, Defendants' current construction does not truly define the claim. The Court is convinced by these arguments and finds that Plaintiff correctly includes TCP/IP in the claim construction.

8. "Website"

Found in Claims: 4, 11, 19, 21, 26, 27, 30, 36¹⁶

E.g., Claim 4: "first website or server located in a first country . . ."

Plaintiff's Proposed Construction: An organization's presence or an individual's presence on the World Wide Web. A website is a collection of Web pages, which are documents coded in HTML that are linked to each other and very often to pages on other Web sites. A Web site is hosted on a server by its owner or at an ISP.

Defendant's Proposed Construction: HTML coded collection of web pages on the World Wide Web that has a www.xxxxxx type World Wide Web address.

Court's Construction: HTML coded collection of web pages on the World Wide Web that has a www.xxxxxx type World Wide Web address and is hosted on a server by its owner or at an ISP.

The Court finds that a website must be hosted on a server, but otherwise adopts Defendants' proposed construction as it a more concise and accurate construction of the term.

¹⁶ Plaintiff's Term 9; Defendants' Term 6.1

Plaintiff does not seriously dispute inclusion of the phrase, “a www.xxxxxx type World Wide Web address.” (Pl.’s Reply Br. at 21.) The prosecution history shows that a website must be hosted by a server, as is stated in the definition from *The Free Dictionary*, and Defendants do not provide a compelling argument for an exclusion of servers from the term. An Office Action Response discusses the term, “website,” and provides in relevant part: “It can be seen from the well-known definition of ‘website’ that a website is HTML coded and is a collection of web pages on the World Wide Web (it has a www.xxxxxx typed World Wide Web address).” (‘870 Prosecution History, Ex. 4 to Pl.’s Open. Br. at TP000181.) Plaintiff also argues that Defendants’ expert admits that websites cannot send messages over packet-switched digital data networks without being hosted on a server. (Pl.’s Reply Br. at 21.) Although Defendants have omitted servers from their definition, their offered construction is consistent with the preferred definition for the USPTO as shown through the prosecution history, and will provide the ordinary and customary meaning of website once supplemented by inclusion of a server requirement.

II. Means-Plus-Function Terms

STANDARD OF REVIEW

“If the word ‘means’ appears in a claim element in association with a function, this court presumes that 35 U.S.C.S. §112 ¶ 6 applies,” so the terms will be considered means-plus-function terms. *Micro Chem. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999). If the claim contains the word “means” the first step is to identify the claimed function. *Id.* at 1258; *see also Asyst Tech. v. Empak, Inc.*, 268 F.3d 1364, 1369 (Fed. Cir. 2001). After the function has been identified, the court must identify the structure corresponding to the claimed function. *Asyst Tech*, 268 F.3d at 1369. The structure must be linked to the function and must

be necessary to actually perform the function; if a structure from the written description is not necessary to perform the corresponding claim, it may not be included. *Id.* Thus, unnecessary structures which do not constitute corresponding structures cannot serve as claims limitations. *Id.* at 1370. Additionally, it is improper to import limitations or functions not expressly recited in the claim of a means-plus-function claim, even if these functions are performed by the preferred embodiments in the specification. *See Omega*, 334 F.3d at 1329-30.

9. Means-Plus-Function terms Allegedly Invalid re Alleged Lack of Structure/Algorithm¹⁷

Defendants argue that the terms in the “means-plus-function terms allegedly invalid re alleged lack of structure/algorithm” grouping render their respective claims (Claims 4, 7, 9, 10, 11, 16, 21, and 26, as well as their dependent claims) invalid for failing to disclose an algorithm. A means-plus-function term may not simply disclose a general purpose computer, but instead must disclose some sort of algorithm or method for the computer to perform the function. *Aristocrat Techs.*, 521 F.3d at 1328. However, “algorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art.” *Allvoice Computing*, 504 F.3d at 1245 (citing *Med. Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1214 (Fed. Cir. 2003) (“here there would be no need for a disclosure of the specific program code if software were linked to the converting function and one skilled in the art would know the kind of program to use”). As such, the source code for an algorithm need not be disclosed, but instead the patentee may express the algorithm in flow charts, text or other means which would allow someone skilled in the art to envision structures capable of carrying out the corresponding function. *Compare Allvoice Computing*,

¹⁷ Plaintiff’s Terms 11B-C, 12, 12B-E, 12, 13B, 14, 14A, 16, 19, 20, 21; Defendants’ Terms 7.1-7.14, 7.38-7.39 (The parties dispute whether Defendants’ Term 7.38 (Pl.’s Term 13B) or Defendants’ Term 7.39 is the proper means-plus-function term to be construed)

504 F.3d at 1240-46 (finding protocol sufficient for structure), and *CIVIX-DDI, LLC v. Microsoft Corp.*, 84 F.Supp.2d 1132 (Fed. Cir. 2000) (finding the recitation of “internal electronic means” sufficient), with *Net MoneyIN*, 545 F.3d at 1367 (finding “bank computer” insufficient structure).

Defendants contend that all of the claim language disputed in this grouping is invalid for failing to disclose an algorithm, as both the inventor and Plaintiff’s expert have admitted as much. (Defs.’ Br. at 46; Mardirossian Dep., Ex. C to Defs.’ Br. at 699:21-700:19; Bates Dep., Ex. F to Defs.’ Br. at 250:14-17.) Plaintiff contends that the corresponding structures, which vary by claim, but consist of a server, website, or packet-switched digital data network, are not general purpose computers and thus do not require an algorithm. (Pl.’s Reply Br. at 22-23.) Further, Plaintiff argues that even if an algorithm is required, the ‘870 Patent discloses a series of steps sufficient to satisfy the “algorithm” requirement. (Pl.’s Reply Br. at 24.) Plaintiff observes that a packet-switched digital data network, such as the Internet, includes switches for routing packets, and uses TCP/IP protocol, and argues that disclosing this structure is more specific than disclosing a general purpose computer. (Pl.’s Open. Br. at 33-34.) Plaintiff also argues that servers and websites serve to render the bounds of the patent more effectively than a general purpose computer, making the claims requiring these structures definite. (Pl.’s Open. Br. at 35.) Defendants counter by claiming that these structures are unnecessary for the claimed function and cannot be arbitrarily added. (Defs.’ Br. at 47.)

Although Plaintiff’s expert, Mr. Bates, and the inventor of the patent, Mr. Mardirossian, both clearly state that there is no algorithm disclosed in the ‘870 Patent, Defendants mischaracterize these statements. Mr. Bates was stating that there is no “special coding” in the language of the ‘870 Patent. (Bates Decl., Ex. 14 to Pl.’s Open. Br. at ¶ 25.) Further the patent need not disclose an algorithm; a description of an algorithm that would allow someone skilled

in the art to envision structures capable of carrying out the corresponding function is sufficient. *See, e.g., Med. Instrument.*, 344 F.3d at 1214. The Federal Circuit has required the disclosure of algorithms because “simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to ‘the corresponding structure, material, or acts’ that perform the function.” *Net MoneyIN*, 545 F.3d at 1367 (citation omitted). While computers may be programmed for a variety of different tasks in a variety of different ways, Mr. Bates has declared that “one having ordinary skill in the art would understand how a server sends its messages.” (Bates Dep., Ex. F to Defs.’ Br. at 219:19-21, 217-219 (explaining how a server works).)

For the aforementioned reasons, when either a server or packet-switched digital data network is a corresponding structure, the claim is valid, and thus none of the disputed terms in this grouping render the claims invalid. The court construes the corresponding structures in the attached chart, however, ensuring that only those structures which are absolutely necessary to performing the claimed function are included. *Asyst Tech*, 268 F.3d at 1370. Thus, when a term claims a means for sending or transmitting, without explicitly stating where the data will be sent, there is no need for a corresponding receiving structure. Conversely, if the claimed term is, for example, “means for sending a paging communication . . . to a second website or server,” (‘870 Patent, Ex. A to Defs.’ Br. at Claim 4) the Court has found this second website or server to be a necessary structure.¹⁸

10. Means-Plus-Function Terms Allegedly Invalid re Conditional/ Ambiguity¹⁹

Defendants argue that Claims 4-10, 16-18, and 31 are invalid for indefiniteness because they include a “when” clause, followed by a “means plus function” limitation. Defendants

¹⁸ *See* Appendix at Group IX for explicit recitation of the corresponding structures.

¹⁹ Plaintiff’s Terms 12A, 13A, 17A, 18A; Defendants’ Terms 7.35-7.37, 7.40

explain that the “when” clause is undisputedly not part of the function of the “means” limitation which “results in a system claim that does not apprise a person of ordinary skill in the art as to the scope of the claim, because it is unclear whether infringement occurs when one creates the system, including the ‘means’ element, or instead only after the ‘when’ clause occurs.” (Defs.’ Br. at 49-50.) Plaintiff argues Defendants have, in fact, construed these claims. (Pl.’s Open. Br. at 37-38.) If a claim is amenable to construction, it is a valid claim. *Exxon*, 265 F.3d at 1375. A claim cannot be found invalid simply because discerning the meaning is a formidable task, instead there must be clear and convincing evidence that some insoluble ambiguity exists and will prevent a person having ordinary skill in the art from determining the scope of the claims. *Id.* Plaintiff relies on *Altiris, Inc. v. Symantec Corp.* to argue that conditional claims are not invalid, but the Court finds this case inapposite as the court in that case did not make a validity determination. *See* 318 F.3d 1363, 1368 (Fed. Cir. 2003). Under 35 U.S.C. § 282 the Court must presume that a granted patent’s claims are valid, since the patent examiner has presumptively considered any §112 issues. Thus, the party seeking to invalidate a claim as indefinite under §112 must show by clear and convincing evidence that one skilled in the art would not understand the scope of the claim when read in light of the specification. *Intellectual Prop. Dev., Inc. v. UA-Columbia Cablevision of Westchester, Inc.*, 336 F.3d 1308, 1319 (Fed. Cir. 2003). The Court declines to find these claims invalid for indefiniteness.

11. Other Means-Plus-Function Terms

a. “Means for Designating” Terms

Found in Claims 11, 16, 21, 26, 34²⁰

E.g., Claim 16: “means for designating a second country, from a plurality of potential countries, in which the receiving user is to be paged”

²⁰ Plaintiff’s Terms 15, 15C, 15F, 15I; Defendants’ Terms 1.6-1.9

Plaintiff’s Proposed Construction: Function: specifying a second country, from a plurality of potential countries, as the country in which the receiving user is to be paged. **Corresponding Structure:** (I) phone, pager, or PC, (ii) website or server, and (iii) packet-switched digital data network, internet, Internet, or PTSN, as described at col. 4:11, 31-36, 50-67; col. 5:1-10,39-43; col. 6:64-66; col. 7:10-13, 18-24, 29-32, 36-45, 47-49; col. 8:10-15, 30-34; Fig. 1 at 17, 15, 9, 3, 21; Fig. 4 at 45, 55, 49; Fig. 5 at 65; and equivalents thereof.

Defendants’ Proposed Construction: Function: the originating user or receiving user inputting a selection of a second country, other than a country code, to be used by the system as the country in which to page the receiving user. **Corresponding Structure:** DTMF (i.e. land line) telephone or PC 17 programmed as set forth in the specification at Figure 4 (‘870 pat. col. 7:18-53); ‘870 pat., col. 6:59-col.7:4; Figure 1.

Court’s Construction: Function: the originating user or receiving user inputting a selection of a second country, from a plurality of countries, to be used by the system as the country in which to page the receiving user.²¹ **Corresponding Structure:** (i) DTMF telephone or PC 17 programmed as set forth in the specification at Figure 4 (‘870 pat. Col. 7:43-49) (ii) website or server 9 as described at Col.7:21-24, and (iii) packet-switched digital data network 3, as described at Col. 4:10-12, 31-36.

The parties dispute both the function and the structure of “means for designating” terms found in Claims 11, 16, 21, 26, and 34. Both parties argue that their proposed functions are correct under the same logic as put forth in support of their constructions for the “designating” terms. As stated above, the Court agrees with Plaintiff that “other than a country code” should not be included, while “from a plurality of potential countries” should be included in the construction of the terms, but otherwise adopts Defendants’ construction. The Court’s construction indicates that the OU or RU makes the “designation” in every such term. As Defendants’ proposed function has been largely adopted, Plaintiff’s argument that Defendants’ proposed structure is flawed for being based on an incorrect function is unpersuasive.

Plaintiff’s argument that there is no language in the claims limiting “DTMF” to landlines also prevails. Defendants argue that since Figure 4 of the ‘870 Patent shows that either a DTMF

²¹ The Court has omitted Defendants’ proposed “originating or receiving user” from its construction, but notes that in Plaintiff’s Term 15I, and Defendants’ corresponding Term, 1.9, the OU is inputting the selection, and as such the omitted term is appropriate.

line or PC is required for the user to input a country selection, they are required structures.

Defendants also point out that Figure 1 distinguishes DTMF lines from cellular phones, arguing that it follows that the definition of DTMF lines should be limited to landlines.

The Court finds that Figure 1 does not in fact show that cellular phones cannot support DTMF lines, but instead shows that paging messages are sent to cellular phones, while the country designation must be input by a DTMF line. If a cellular phone can support a DTMF line, and based on Defendants' deposition testimony it can, then a cellular phone can input the country designation. (*See* Motorola Dep., Ex. 10 to Pl.'s Open. Br. at 69, 72, 101; Samsung Dep., Ex. 28 to Pl.'s Open. Br. at 85; LG Dep., Ex. 13 to Pl.'s Open. Br. at 60-61, 83-85;85.) For example, Motorola's corporate designee, in deposition stated that "in general, a cellular telephone able to make calls can pass DTMF tones" (Ex. 10 to Pl.'s Open. Br. at 69.) As such, the Court cannot limit the construction of DTMF lines to land lines.

Further, when the user is inputting a designation, a server or website and a digital data network are required structures. Figure 1 to the Patent indicates that a website is interchangeable with a server, thus undermining Defendants' contention that the Patent does mention a website and that a website is not capable of performing the claimed function. (*See* Ex. E to Defs.' Br. at ¶ 49-50.) Moreover, the Patent explicitly states that "the receiving user telephones (or emails) any website or server 9 of the system in step 41," where step 41 is the first step of Figure 4 documenting how to designate a country. ('870 Patent Ex. A to Defs.' Br. at 7:21-24.) Even if a website is incapable of accepting a user's designation, the Patent indicates that a website is necessary when the user uses a PC to input his or her designation. (*See id.*; *see also Id.* at Fig. 3-4.) Finally, a digital data network is required to "communicate the new country designation in step 47 to all other servers in the Fig. 1 paging system via network." (*Id.* at 7:33-36.)

While these structures are required, it is well established that structures which are not absolutely necessary to the claimed function are not to be included as corresponding structures. *Asyst Tech*, 268 F.3d at 1369. As such, while a website or server and a digital data network are required corresponding structures, the Court does not include the entirety of the specification describing Figure 4 to indicate how PC 17 should be programmed, as Defendants do, superfluously. The Court has selected excerpts of the specification which succinctly and clearly describe the remaining corresponding structures, and refrains from including any language not essential to defining these structures in the context of the claimed function.

b. “Means for the Paging System Initiating Paging operations in Another Country in a Predetermined Order” Term

Found in Claims 9, 13, 16, 30, and 31²²

E.g., Claim 9: “means for the paging system initiating paging operations in another country in a predetermined order in an attempt to page the receiving user”

Plaintiff’s Proposed Construction: *Function:* beginning paging operations in another country in an order determined before the operations begin in an attempt to page the receiving user. ***Corresponding Structure:*** server, as described at one or more of: col. 6:3-11; and col. 6:49-51 (ending with “times” at line 51); and equivalents thereof.

Defendant’s Proposed Construction: *Function:* the paging system attempting to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the paging system determines whether any country has been designated. ***Corresponding Structure:*** Originating server 9 programmed to cause the receiving user to be paged in accordance with the process set forth in Figs. 2-3, col. 5:52 – col. 6:11, 14-58; and a terminating server and a wireless transmitter in another country as set forth in col. 5:23-25; col. 6:48-58, col. 7:59-col. 8:2, Figs. 1-5.

Court’s Construction: *Function:* the paging system beginning to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the operations begin in an attempt to page the receiving user ***Corresponding Structure:*** Originating server 9 programmed to cause the receiving user to be paged in accordance with the process set forth in Figs. 2-3, col. 5:23-col. 6:11, 14-

²² Plaintiff’s Term 17; Defendants’ Term 2.8

58; and a terminating server 9 and a local digital transmitter/receiver 11 in another country, as set forth in col. 5:16-19, 23-25; col. 6:48-58, Figs. 1-5.

The parties dispute both the function and the structure of the “means for the paging system initiating paging operations in another country in a predetermined order” term, found in Claims 9, 13, 16, 30, and 31. As stated above, the Court agrees with Plaintiff that “initiating” means beginning and that this function occurs “before the operations begin in an attempt to page the receiving user,” but agrees with Defendants’ construction for the remainder of the term.

Regarding the corresponding structures, the parties dispute whether a wireless transmitter should be included and whether the corresponding structures must be in another country. Plaintiff argues that a wireless transmitter is unnecessary to begin paging operations, pointing to language in the ‘870 Patent which states, “the OU either telephones or E-mails an originating server 9 in order to imitate a page to an RU.” (870 Patent at 7:56-57.) However, this language shows that upon receiving notification from the OU, the server will begin paging operations; it does not state how the server actually initiates these pages. In order to send a page, the server transmits the paging data and message “over network 3 to a remote or terminator server 9 located in the designated country.” (*Id.* at 8:6-8.) “Once the terminating website or server 9 is given the pager ID and paging message, the terminating server transmits or causes the paging message and I.D. data to be transmitted” (*Id.* at 5:16-19.) Figure 1 further supports this assertion, confirming the inclusion of a local digital transmitter/receiver 11 as a structure. (*See id.* at Fig. 1.)

Finally, Defendants contend that the claim language requires “initiating paging operations *in* another country in a predetermined order in an attempt to page the receiving user.” (Defs.’ Br. at 31.) Plaintiff fails to include this limitation in its construction or offer justification for its exclusion. The “in another country” limitation is consistent with the claim language,

under the same logic as presented above,²³ and as such, should be included in the construction. Only structures that are necessary can be included as corresponding structures, and as such, the Court refrains from including any language not essential to defining these structures in the context of the claimed function. *Asyst Tech*, 268 F.3d at 1370.

c. “Means for the Paging System Causing Paging Operations in a Plurality of Other Countries from a Predetermined List” Term

Found in Claim 31: “means for the paging system causing paging operations in a plurality of other countries from a predetermined list in attempts to page the receiving user.”²⁴

Plaintiff’s Proposed Construction: *Function:* causing paging operations in plurality of other countries from a predetermined list in attempts to page the receiving user.

Corresponding Structure: (i) servers, and (ii) packet-switched digital data network, internet, or Internet, as described at: col. 3:1-4, 67- col.4:4; col. 4:10-11; col. 5:11-15 (ending with “server 9” at line 15), 58-60; col. 8:3, 5-7; Fig. 1 at 9, 3; and at one or more of: col. 6:20-25,28-38, 48-53; col. 7:3-5; Fig. 5 at 67, 81; and col. 8:23-24; and equivalents thereof

Defendants’ Proposed Construction: *Function:* the paging system attempting to page the receiving user in two or more other countries form a list created by the receiving user before the paging system determines whether any country has been designated.

Corresponding Structure: Originating server 9 programmed to cause the receiving user to be paged in accordance with the process set forth in Figs. 2-3,5, col.5:52 – col. 6:11, 14-58; and a terminating server and a wireless transmitter in the other countries as set forth in col. 5:23-35, col. 6:48-58, col. 7:59-col.8:2, Figs. 1,5.

Court’s Construction: *Function:* the paging system causing the paging system to page the receiving user in two or more other countries from a list created by the receiving user before the operations begin in an attempt to page the receiving user. ***Corresponding***

Structure: Originating server 9 programmed to cause the receiving user to be paged in accordance with the process set forth in Figs. 2-3, col. 5:23 – col. 6:11, 14-58; and a terminating server 9 and a local digital transmitter/receiver 11 in another country, as set forth in col. 5:16-19, 23-25; col. 6:48-58, Figs. 1-5.

The Court adopts a function which includes Plaintiff’s proposed “caused,” Plaintiff’s definition of when this function is performed “before . . . ,” and the remainder of the term as

²³ All of the disputed terms fall into the second version of “Another Country” as found and construed for Claims 4, 6, 9, 13, 16, 18, 30, and 34 to be a “country other than the first or second country.”

²⁴ Plaintiff’s Term 18; Defendants’ Term 2.9

construed by Defendants. The Patent is clear that the RU creates the list of countries that will allow the system to page the RU in a predetermined order. (*See, e.g.*, ‘870 Patent 6:7 (“the RU’s list”).) Further, Plaintiff argues that since this term requires a list, the other terms do not require a list. This argument is unpersuasive. Only structures that are necessary can be included as corresponding structures, and as such, the Court refrains from including any language not essential to defining these structures in the context of the claimed function. *Asyst Tech*, 268 F.3d at 1370.

12. Alleged Invalidity Regarding Mixing²⁵

Defendants argue that the terms that express user action in the system render indefinite the claims in which they appear. The parties dispute whether the claims cover both a system and an apparatus so as to render infringement determinations unclear to one having ordinary skill in the art. If these determinations are unclear the claims will be invalid for mixing. Defendant contends that “[a]ll of Plaintiff’s constructions thus require reading out express user action to make them definite, contrary to black letter law.” (Defs.’ Br. at 48.) In *IPXL Holdings, LLC v. Amazon.com, Inc*, 430 F.3d 1377, 1384 (Fed. Cir. 2005), the Federal Circuit held that a system claim that covers express user action was “not sufficiently precise to provide competitors with an accurate determination of the ‘metes and bounds’ of protection involved.” In that case, the Federal Circuit found the claim at issue invalid because it was unclear if infringement would occur when one created a system (as would be true if the claim were for an apparatus) or if one would actually have to use it (as required for one to infringe a system). Defendants argue that the user action in the instant disputed terms renders these terms invalid, similarly to the claim in *IPXL*. (Defs.’ Br. at 48.) Plaintiff responds that *IPXL* has a very narrow holding, pointing to the

²⁵ Plaintiff’s Terms 15A-B, 15D-E, 15G-H, 15J-M, 22C-I; Defendants’ Terms 7.15-7.31

frequent judicial rejections of parties' attempts to use the *IPXL* defense in cases addressing the issue since *IPXL* was decided. (Pl.'s Open. Br. at 43.)

Many of the cases put forth by the Plaintiff are district court cases and do not supplant the well established precedent of the Federal Circuit. *See, e.g., Ricoh Co., Ltd. v. Katun Corp.*, 486 F.Supp.2d 395, 402 (D.N.J. 2007) (stating that in almost all district court cases where this issue has arisen the courts have found that the *IPXL* defense does not apply.) However, in *Microprocessor Enhancements v. Texas Instruments*, 520 F.3d 1367 (Fed. Cir. 2008), the Federal Circuit found a claim with mixed subject matter valid because there was no lack of clarity as to when the mixed subject matter would be infringed. Defendants state that *Microprocessor* is not applicable here, but a reading of the claims reveals that the claims here, like those in *Microprocessor*, cause no confusion as to when the subject matter would be infringed. *Id.* at 1374-75. Here, the patent is for a global paging system and the claims all speak to a user implementing this system, not to the creation of this system. (*See, e.g., Ex. 1 to Pl.'s Open. Br. Claim 30 at 14:6-7, 14:14-16, 14:21* (“a paging system . . . *for transmitting pages,*” “a website *allowing* an originating user in an originating country *to page . . .*” “the originating user in the first country inputs . . . *to be sent*”) (emphasis added).) Thus, the Court does not find that mixing makes these claims invalid.

13. Additional Alleged Invalidity²⁶

The Court finds Claims 4-10, 30-33, and 36-39 are not rendered invalid by terms concerning state of mind or being. Defendants argue that the Federal Circuit's decision in *IPXL* dictates that claims concerning a state of mind or being should also be found invalid. (Defs.' Br. at 39.) However, as discussed above, claims are not per se invalid if they involve a user action, but instead are invalid if mixed subject matter in a claim would confuse one having ordinary skill

²⁶ Plaintiff's Terms 22, 22A, 22B; Defendants' Terms 7.32-7.34

in the art as to the scope of the claim and cause confusion as to when the subject matter is infringed. *Microprocessor*, 520 F.3d at 1374-75. The Court finds that the disputed terms are not invalid for covering a state of mind or being because there is no confusion over when the subject matter will be infringed.

Next, Defendants argue that the state of mind and being terms are insolubly ambiguous since there is no way to determine if a user does “not necessarily know,” nor a way to determine if a user “may be located” somewhere. (Defs.’ Br. at 39.) Plaintiff argues that Defendants’ assertions of ambiguity are insufficient to meet their burden of showing indefiniteness by clear and convincing evidence. (Pl.’s Open. Br. at 49.) First, Plaintiff points to three dictionaries’ definitions of “may” to show that the word is well understood and does not introduce indefiniteness. (Pl.’s Open. Br. 49-50; Dictionary Excerpts, Exs. 5, 18, 20 to Pl.’s Open. Br.) Second, Plaintiff argues that the system is intended to function when the RU’s location is unknown, and that this was understood by a three-member panel of APJ’s during patent prosecution, so “not necessarily know” should not be construed as indefinite. (Pl.’s Open. Br. at 50; ‘870 Patent, Ex. 1 to Pl.’s Open. Br. at 3:45-62; Ex. 16 to Pl.’s Open. Br. at TP000309, TP000340-41, TP000346.)

Defendants have failed to show, by clear and convincing evidence, that these disputed terms are indefinite, however. The patent clearly shows that the system is intended to function when the RU’s location is unknown. (*See, e.g.*, ‘870 Patent Ex. 1 to Pl.’s Open. Br. at 3:45-62 (“receiving users may be paged in different countries around the world regardless of whether the caller or originating user knows the exact whereabouts of the receiving user.”).) In *Datamize LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1352 (Fed. Cir. 2005), the Federal Circuit found the term “aesthetically pleasing” to be insolubly ambiguous since the term was dependent on an

undefined standard, and “undefined standards, regardless of whose views might influence the formation of those standards, fail[] to provide any direction to one skilled in the art attempting to determine the scope of the claimed invention.” *Id.* In contrast, the terms at hand are clear. A person having ordinary skill in the art would interpret “not necessarily know” to mean that the RU’s location is unknown and “may be located” to mean that the RU might not be in a specific country. These terms do not impose indefinable requirements on the system, and Defendants have not shown clear and convincing evidence to the contrary.

14. Terms Whose Meanings Are No Longer Disputed²⁷

The parties agree that the structure for Claims 6 and 31 is “pager.”

CONCLUSION

Having construed representative terms in the fourteen groupings the parties submitted to the Court, the Court refers the parties to the following Table for construction of the individual terms.

August 25, 2010

Date

/s/

Alexander Williams, Jr.
United States District Judge

²⁷ Plaintiff’s Terms 11, 11A; Defendants’ Terms 8.1, 8.2

TABLE OF CONSTRUED TERMS

A. Non Means-Plus-Function Terms

Group I – Paging Terms

Term	Claim Term, Phrase, or Clause	Court’s Construction
I.A	“ paging system ” Claims 4, 9, 13, 16, 30, 31, 34, and 36	a system for routing messages to be sent to handheld portable electronic devices for receiving messages
I.B	“ system for paging ” Claims 4, 9, 11, 26, 27, 30, and 34	a system for routing messages to be sent to handheld portable electronic devices for receiving messages
I.C	“ paging message ” Claims 4, 6, 9, 11, 16, 19, 21, 23, 26, 27, 30, 31, 34, 35, 36, and 39	a message to be sent to a handheld portable electronic device for receiving messages
I.D	“ system for sending and receiving paging signals ” Claim 21	a system for sending and receiving paging signals for handheld portable electronic devices that receive messages
I.E	“ pager ID ” Claim 16	an identifier for a pager, which is a handheld portable electronic device for receiving messages
I.F	“ to page ” Claims 1, 4, 6, 9, 11, 13, 16, 18, 19, 21, 26, 27, 30, 31, 34, and 36	to send a message to a handheld portable electronic device for receiving messages

Group II- “Designating and Country Data Terms”

Term	Claim Term, Phrase, or Clause	Court’s Construction
II.A	<p>“designating a page receiving country, from a plurality of potential countries, in which a receiving user is to be paged”</p> <p>Claim 19</p>	<p>inputting a selection of a page receiving country, from a plurality of potential countries, to be used by the system as the country in which to page the receiving user</p>
II.B	<p>“designates a second country from a plurality of potential countries in which the receiving user is to be paged”</p> <p>Claim 27</p>	<p>inputs a second country, from a plurality of potential countries, to be used by the system as the country in which to page the receiving user</p>
II.C	<p>“country data”</p> <p>Claims 11, 17, 19, 21, 26, and 27</p>	<p>data that identifies a country</p>
II.D	<p>“wherein the paging system determines if the second country is currently designated by the receiving user as a designated country in which the paging system is to attempt to page the receiving user”</p> <p>Claim 4</p>	<p>wherein the paging system determines if the receiving user has input a selection of the second country, currently²⁸ to be used by the system as the country in which to attempt to page the receiving user</p>
II.E	<p>“determining if the page receiving country is currently designated by the receiving user as a designated country in which the paging system is to attempt to page the receiving user”</p> <p>Claim 36</p>	<p>determining if the page receiving user has input a selection of the page receiving country to be used by the system as the country in which to attempt to page the receiving user</p>
II.F	<p>“when the paging system determines that the second country has been designated by the receiving user”</p>	<p>in the event that the paging system determines that receiving user has input a selection of the second country to be used by the system as</p>

²⁸ The Court agrees with Plaintiff that Defendants’ construction arbitrarily excludes “currently”; the Court declines to exclude it.

	Claim 4	the country in which to attempt to page the receiving user
Term	Claim Term, Phrase, or Clause	Court's Construction
II.G	<p>“when the paging system determines that the second country has not been designated by the receiving user”</p> <p>Claims 4, 9, 16, 30, 31, and 34</p>	in the event that the paging system determines that that receiving user has not input a selection of the second country to be used by the system as the country in which to attempt to page the receiving user
II.H	<p>“when it is determined that the second country has been designated by the receiving user”</p> <p>Claims 9 and 34</p>	in the event that the system determines that that receiving user has input a selection of the second country to be used by the system as the country in which to attempt to page the receiving user
II.I	<p>“when the paging system determines that the page receiving country has been designated by the receiving user”</p> <p>Claim 36</p>	in the event that the paging system determines that that receiving user has input a selection of the page receiving country to be used by the system as the country in which to attempt to page the receiving user
II.J	<p>“when the paging system determines that the page receiving country has not been designated by the receiving user”</p> <p>Claim 36</p>	in the event that the paging system determines that that receiving user has not input a selection of the page receiving country to be used by the system as the country in which to attempt to page the receiving user

Group III – Initiating Paging operations in Another Country in a Predetermined Order

Term	Claim Term, Phrase, or Clause	Court’s Construction
III.A	<p>“initiates paging operations in another country in a predetermined order in an attempt to page the receiving user”</p> <p>Claim 4</p>	<p>begins to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the paging system determines whether any country has been designated</p>
III.B	<p>“initiating paging operations in another country in a predetermined order in an attempt to page the receiving user”</p> <p>Claims 9, 13, 16, 30, 34, and 36</p>	<p>beginning to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the paging system determines whether any country has been designated</p>

Group IV – Another Country

Term	Claim Term, Phrase, or Clause	Court’s Construction
IV.A	<p>“another country”</p> <p>Claims 19, 21, and 36</p>	<p>a country different than the page receiving country, but which may or may not be the originating country</p>
IV.B	<p>“another country”</p> <p>Claims 4, 6, 9, 13, 16, 18, 30, and 34</p>	<p>country other than the first and second country</p>

Group V- Originating Country & Receiving Country

Term	Claim Term, Phrase, or Clause	Court’s Construction
V.A	<p>“originating country”</p> <p>Claims 19, 21, and 36</p>	<p>country, other than the page receiving country, in which a page is originated</p>
V.B	<p>“page receiving country”</p> <p>Claims 19, 20, 21, 22, 23, 36, 38, and 39</p>	<p>country, other than the originating country, in which a page is received</p>

Group VI – Computer Terms

Term	Claim Term, Phrase, or Clause	Court’s Construction
VI.A	<p>“a computer for receiving the paging message via at least a digital data network”</p> <p>Claim 27</p>	a computer for receiving the paging message from the website via at least a digital data network
VI.B	<p>“to cause the paging message to be sent over at least a packet-switched digital data network to a second computer”</p> <p>Claim 34</p>	to cause the paging message to be sent over at least a packet switched digital data network to a second computer

Group VII- Internet

Term	Claim Term, Phrase, or Clause	Court’s Construction
VII.	<p>“the Internet”</p> <p>Claims 5, 14, 24, 28, 32, 35, and 37</p>	the collection of networks and gateways, spanning multiple countries, that is packet-switched and uses TCP/IP protocol

Group VIII – Website

Term	Claim Term, Phrase, or Clause	Court’s Construction
VIII.	<p>“website”</p> <p>Claims 4, 11, 19, 21, 26, 27, 30, and 36</p>	HTML-coded collection of web pages on the World Wide Web that has a www.xxxxxx type World Wide Web address and is hosted on a server by its owner or at an ISP

B. Means-Plus-Function Terms

Group IX - Means-Plus-Function terms Allegedly Invalid re Alleged Lack of Structure/Algorithm

Term	Claim Term, Phrase, or Clause	Court’s Construction
IX.A	<p>“means for sending a paging communication via at least the packet-switched digital data network to a second website or server”</p> <p>Claim 4</p>	<p><i>Function:</i> sending a paging communication via at least the packet-switched digital data network to a second website or server</p> <p><i>Corresponding Structure:</i> (i) first website or server 9, (ii) packet-switched digital data network 3, (iii) second website or server 9, as described at: Abstract, lines 7-9 (ending with “server” at line 9); col. 3:1-4 (ending with “server” at line 4); col. 3:67-4:4; col. 5:11-15 (ending with “server 9” at line 15); col. 8:3-6 (ending with “server 9” at line 6); and equivalents thereof</p>
IX. B	<p>“means for transmitting the paging message over at least a digital data network to a computer”</p> <p>Claim 11</p>	<p><i>Function:</i> transmitting the paging message over at least a digital data network to a computer</p> <p><i>Corresponding Structure:</i> (i) first website or server 9, (ii) packet-switched digital data network 3, (iii) second website or server 9, as described at: Abstract, lines 7-9 (ending with “server” at line 9); col. 3:67-4:6 (ending with “attempted” at line 4); col. 3:67-4:6; col. 5:11-15 (ending with “server 9” at line 15); and col. 8:3-6 (ending with “server 9” at line 6); and equivalents thereof</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
IX.C	<p data-bbox="440 270 922 411">“means for transmitting the pager ID and the paging message over at least a packet-switched digital data network to a second server”</p> <p data-bbox="440 453 561 485">Claim 16</p>	<p data-bbox="964 270 1435 411">Function: transmitting the pager ID and the paging message over at least a packet-switched digital data network to a second server</p> <p data-bbox="964 491 1435 884">Corresponding Structure: (i) first website or server 9, (ii) packet-switched digital data network 3, (iii) second website or server 9, as described at: Abstract, lines 7-9 (ending with “server” at line 9); col. 3:67-4:6 (ending with “attempted” at line 4); col. 3:67-4:6; col. 5:11-15 (ending with “server 9” at line 15); and col. 8:3-6 (ending with “server 9” at line 6); and equivalents thereof</p>
IX.D	<p data-bbox="440 963 922 1146">“means for transmitting the device ID of the receiving user, and the paging message, over at least a digital data network to a computer”</p> <p data-bbox="440 1188 561 1220">Claim 26</p>	<p data-bbox="964 963 1435 1104">Function: transmitting the device ID of the receiving user, and the paging message, over at least a digital data network to a computer</p> <p data-bbox="964 1184 1435 1577">Corresponding Structure: (i) first website or server 9, (ii) packet-switched digital data network 3, (iii) second website or server 9, as described at: Abstract, lines 7-9 (ending with “server” at line 9); col. 3:67-4:6 (ending with “attempted” at line 4); col. 3:67-4:6; col. 5:11-15 (ending with “server 9” at line 15); and col. 8:3-6 (ending with “server 9” at line 6); and equivalents thereof</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
IX.E	<p>“means for sending a paging communication via at least the digital data network to a second computer . . . and . . . causing the second computer to implement paging the receiving user via the wireless transmitter in the second country”</p> <p>Claim 9</p>	<p><i>Function:</i> sending a paging communication via at least the digital data network to a second computer, and causing the second computer to implement paging the receiving user via the wireless transmitter in the second country.</p> <p><i>Corresponding Structure:</i> (i) first website or server 9, (ii) packet-switched digital data network 3, (iii) second website or server 9, (iv) transmitter/receiver, (v) transmitting tower 13, and (vi) pager, as described at: Abstract, lines 6-9 (ending with “server” at line 9); col. 3:1-8; col. 3:67-4:4; col. 4:10-11, 28-30 (ending with “tower 13” at line 30), 36-39; col. 5:11-15 (ending with “server 9” at line 15), 18-22, 32-35 (ending with “or the like” at line 35), 58-62; col. 8:3-9; Fig. 1 at 9, 3, 11, 13, 21; Fig. 5 at 69, 71; and equivalents thereof</p>
IX.F	<p>“means for determining whether the second country is currently designated by the receiving user as a designated country in which the paging system is to attempt to page the receiving user”</p> <p>Claim 9</p>	<p>Construed in Term IX.E²⁹</p>

²⁹ The Court construes the term in accordance with Defendants’ request in Term IX.O.

Term	Claim Term, Phrase, or Clause	Court's Construction
IX.G	<p>“computer means . . .causing a wireless transmitter located in the page receiving country to page a receiving user in the page receiving country”</p> <p>Claim 21</p>	<p><i>Function:</i> causing a wireless transmitter located in the page receiving country to page a receiving user in the page receiving country.</p> <p><i>Corresponding Structure:</i> (i) website or server 9, (ii) transmitter/receiver 11, (iii) transmitting tower 13, and (iv) pager, as described at: col. 3:5-8; col. 4:28-30 (ending with “tower 13” at line 30), 36-39; col. 5:18-22, 32-35 (ending with “or the like” at line 35), 60-62; col. 8:8-9 (beginning at “terminator server 9” at line 8); Fig. 1 at 9, 11, 13, 21; Fig. 5 at 71; and equivalents thereof</p>
IX.H	<p>“the second server including means for causing the wireless transmitter located in the second country to send the paging message to the receiving user”</p> <p>Claim 16</p>	<p><i>Function:</i> causing the wireless transmitter located in the second country to send the paging message to the receiving user.</p> <p><i>Corresponding Structure:</i> (i) website or server 9, (ii) transmitter/receiver 11, (iii) transmitting tower 13, and (iv) pager 21, as described at: col. 5:18-22, 32-35 (ending with “or the like” at line 35), 60-62; Fig. 1 at 9, 11, 13, 21; Fig. 5 at 71; and equivalents thereof</p>
IX.I	<p>“means for the originating user communicating with the first web site or server via email to cause paging of the receiving user”</p> <p>Claim 7</p>	<p><i>Function:</i> originating user communicating with the first web site or server via email to cause paging of the receiving user</p> <p><i>Corresponding Structure:</i> (i) PC 17, (ii) website or server 9, and (iii) packet-switched digital data network 3, as described at: col. 4:1, 11, 31-36, 54-58, 63-64; col. 5:4-10, 39-43; Fig. 1 at 17, 15, 9, 3; Fig. 4 at 51; and equivalents thereof</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
IX.J	<p>“means for the originating user communicating with the first computer via electronic mail to cause paging of the receiving user”</p> <p>Claim 10</p>	<p><i>Function:</i> originating user communicating with the first computer via electronic mail to cause paging of the receiving user</p> <p><i>Corresponding Structure:</i> (i) PC, 17 (ii) website or server 9, and (iii) packet-switched digital data network 3, as described at: col. 4:1, 11, 31-36, 54-58, 63-64; col. 5:4-10, 39-43; Fig. 1 at 17, 15, 9, 3; and equivalents thereof</p>
IX.K	<p>“means, in an originating country, for allowing an originating user to send a paging signal to a website located in the originating country, the paging signal including a paging message to be sent to a receiving user”</p> <p>Claim 21</p>	<p><i>Function:</i> in an originating country, allowing an originating user to send a paging signal to a website located in the originating country, the paging signal including a paging message to be sent to a receiving user</p> <p><i>Corresponding Structure:</i> (i) DTMF phone or PC 17, connected to a telephone or internet link 15 via a modem, as described at: col. 4:50-67; Fig. 1 at 17 and 15; and equivalents thereof</p>
IX.L	<p>“means, in a page receiving country, for transmitting a device ID of a receiving user, and a paging message which came from another country, over at least the digital data network to a computer means that is located in the page receiving country”</p> <p>Claim 21</p>	<p><i>Function:</i> in a page receiving country, transmitting a device ID of a receiving user, and a paging message which came from another country, over at least the digital data network to a computer means that is located in the page receiving country</p> <p><i>Corresponding Structure:</i> (i) website or server 9, and (ii) packet-switched digital data network, as described at one or more of: Abstract, lines 7-10 (ending with “country” at line 10); col. 3:1- 4 (ending with “country” at line 4); col. 3:67-4:4; col. 5:11-15; and equivalents thereof</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
IX.M	<p data-bbox="440 237 902 415">“means for permitting a device of the receiving user in the page receiving country to send a confirmation signal confirming receipt of the paging message”</p> <p data-bbox="440 457 561 489">Claim 23</p>	<p data-bbox="964 237 1435 415"><i>Function:</i> permitting a device of the receiving user in the page receiving country to send a confirmation signal confirming receipt of the paging message</p> <p data-bbox="964 457 1435 741"><i>Corresponding Structure:</i> pager, as described at: col. 5: 32-35,; col. 8:1 (“pager indicates receipt of a page”), col. 8:10, col. 8:13-15, col. 8:27 (“receipt of the page is confirmed at 83”), col. 8:34 (“page was confirmed at 83”); and Fig. 5 at 73 or 83, and equivalents thereof</p>
IX.N	<p data-bbox="440 789 870 968">“means for the device of the receiving user in the second country sending a confirmation signal confirming receipt of the paging message”</p> <p data-bbox="440 1010 561 1041">Claim 35</p>	<p data-bbox="964 789 1435 926"><i>Function:</i> the device of the receiving user in the second country sending a confirmation signal confirming receipt of the paging message</p> <p data-bbox="964 968 1435 1251"><i>Corresponding Structure:</i> pager, as described at: col. 5: 32-35,; col. 8:1 (“pager indicates receipt of a page”), col. 8:10, col. 8:13-15, col. 8:27 (“receipt of the page is confirmed at 83”), col. 8:34 (“page was confirmed at 83”); and Fig. 5 at 73 or 83, and equivalents thereof</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
IX.O	<p data-bbox="440 237 902 520">“means for sending a paging communication via at least the digital data network to a second computer . . . and . . . causing the second computer to implement paging the receiving user via the wireless transmitter in the second country”</p> <p data-bbox="440 562 545 594">Claim 9</p>	<p data-bbox="963 237 1438 485"><i>Function:</i> sending a paging communication via at least the digital data network to a second computer, and causing the second computer to implement paging the receiving user via the wireless transmitter in the second country.</p> <p data-bbox="963 527 1438 961"><i>Corresponding Structure:</i> (i) first website or server 9, (ii) packet-switched digital data network 3(iii) second website or server 9, (iv) transmitter/receiver 11, (v) transmitting tower 13, as described at: col. 3:1-8; col. 3:67-4:4; col. 4:10-11, 28-30 (ending with “tower 13” at line 30), 36-39; col. 5:11-15 (ending with “server 9” at line 15), 18-22, 58-62; col. 8:8-9; Fig. 5 at 69, 71; and equivalents thereof</p>
IX.P	<p data-bbox="440 972 878 1108">“means for sending a paging communication via at least the digital data network to a second computer”</p> <p data-bbox="440 1150 545 1182">Claim 9</p>	<p data-bbox="1027 961 1369 993">Construed in Term IX.O³⁰</p>

³⁰ The Court construes the term in accordance with Defendants’ request in Term IX.O.

Group X – Means-Plus-Function Terms Allegedly Invalid For Lack of Structure/Algorithm

Term	Claim Term, Phrase, or Clause	Court’s Construction
X.A	<p>“when the paging system determines that the second country has been designated by the receiving user, means for sending a paging communication via at least the packet-switched digital data network to a second website or server”</p> <p>Claim 4</p>	<p>in the event that the paging system determines that receiving user has input a selection of the second country to be used by the system as the country in which to attempt to page the receiving user, sending a paging communication via at least the packet-switched digital data network to a second website or server</p> <p>(combines Terms II.F and IX.A)</p>
X.B	<p>“when the paging system determines that the second country has not been designated by the receiving user, means for the paging system initiating paging operations in another country in a predetermined order in an attempt to page the receiving user”</p> <p>Claims 9 and 16</p>	<p>in the event that the paging system determines that that receiving user has not input a selection of the second country to be used by the system as the country in which to attempt to page the receiving user, the paging system beginning to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the operations begin in an attempt to page the receiving user</p> <p>(Combines II.G and XI.B)</p>
X.C	<p>“when the paging system determines that the second country has not been designated by the receiving user, means for the paging system causing paging operations in a plurality of other countries from a predetermined list in attempts to page the receiving user”</p> <p>Claim 31</p>	<p>in the event that the paging system determines that that receiving user has not input a selection of the second country to be used by the system as the country in which to attempt to page the receiving user, the paging system causing the paging system to page the receiving user in two or more other countries from a list created by the receiving user before the operations begin in an attempt to page the receiving user</p> <p>(combines II.G and XI.C)</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
X.D	<p>“causing the second computer to implement paging the receiving user via the wireless transmitter in the second country”</p> <p>Claim 9</p>	<p>Causing the second computer to implement paging the receiving user via the wireless transmitter in the second country</p>

Group XI – Other Means-Plus-Function Terms

Term	Claim Term, Phrase, or Clause	Court's Construction
XI.A.1	<p>“means for designating a second country in which the receiving user is to receive the paging message”</p> <p>Claim 34</p>	<p><i>Function:</i> the originating user or receiving user inputting a selection of a second country to be used by the system as the country in which to page the receiving user</p> <p><i>Corresponding Structure:</i> (i) DTMF telephone or PC 17 programmed as set forth in the specification at Figure 4 ('870 pat. Col. 7:43-49) (ii) website or server 9 as described at Col.7:21-24, and (iii) packet-switched digital data network 3, as described at Col. 4:10-12, 31-36</p>
XI.A.2	<p>“means for designating a second country, from a plurality of potential countries, in which the receiving user is to be paged”</p> <p>Claims 11 and 26</p>	<p><i>Function:</i> the originating user or receiving user inputting a selection of a second country, from a plurality of countries, to be used by the system as the country in which to page the receiving user</p> <p><i>Corresponding Structure:</i> (i) DTMF telephone or PC 17 programmed as set forth in the specification at Figure 4 ('870 pat. Col. 7:43-49) (ii) website or server 9 as described at Col.7:21-24, and (iii) packet-switched digital data network 3, as described at Col. 4:10-12, 31-36</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
<p>XI.A.3</p>	<p>“means for designating a second country, from a plurality of potential countries, in which the receiving user is to be paged”</p> <p>Claim 16</p>	<p><i>Function:</i> the originating user or receiving user inputting a selection of a second country, from a plurality of countries, to be used by the system as the country in which to page the receiving user</p> <p><i>Corresponding Structure:</i> (i) DTMF telephone or PC 17 programmed as set forth in the specification at Figure 4 ('870 pat. Col. 7:43-49) (ii) website or server 9 as described at Col.7:21-24, and (iii) packet-switched digital data network 3, as described at Col. 4:10-12, 31-36</p>
<p>XI.A.4</p>	<p>“means, in the originating country, for allowing the originating user to designate a page receiving country from a plurality of potential countries in which a receiving user is to be paged, by using country data”</p> <p>Claim 21</p>	<p><i>Function:</i> in the originating country, the originating user or receiving user inputting a selection of a page receiving country, from a plurality of countries, to be used by the system as the country in which to page the receiving user, by using data that identifies a country</p> <p><i>Corresponding Structure:</i> (i) DTMF telephone or PC 17 programmed as set forth in the specification at Figure 4 ('870 pat. Col. 7:43-49) (ii) website or server 9 as described at Col.7:21-24, and (iii) packet-switched digital data network 3, as described at Col. 4:10-12, 31-36</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
XI.B	<p>“means for the paging system initiating paging operations in another country in a predetermined order in an attempt to page the receiving user”</p> <p>Claims 9, 13, 16, and 30</p>	<p><i>Function:</i> the paging system beginning to page the receiving user in another country that is first in an ordered list of two or more countries created by the receiving user before the operations begin in an attempt to page the receiving user</p> <p><i>Corresponding Structure:</i> Originating server 9 programmed to cause the receiving user to be paged in accordance with the process set forth in Figs. 2-3, col. 5:23 – col. 6:11, 14-58; and a terminating server 9 and a local digital transmitter/receiver 11 in another country, as set forth in col. 5:16-19, 23-25; col. 6:48-58, Figs. 1-5</p>
XI.C	<p>“means for the paging system causing paging operations in a plurality of other countries from a predetermined list in attempts to page the receiving user”</p> <p>Claim 31</p>	<p><i>Function:</i> the paging system causing the paging system to page the receiving user in two or more other countries from a list created by the receiving user before the operations begin in an attempt to page the receiving user</p> <p><i>Corresponding Structure:</i> Originating server 9 programmed to cause the receiving user to be paged in accordance with the process set forth in Figs. 2-3, col. 5:23 – col. 6:11, 14-58; and a terminating server 9 and a local digital transmitter/receiver 11 in another country, as set forth in col. 5:16-19, 23-25; col. 6:48-58, Figs. 1-5</p>

Group XII – Alleged Invalidity for Mixing

Term	Claim Term, Phrase, or Clause	Court’s Construction
XII.A	<p>“wherein, in order to page the receiving user, the originating user in the first country inputs a device ID of the receiving user and a paging message to be sent to the receiving user using the website”</p> <p>Claim 30</p>	<p>wherein the system including the “website allowing an originating user in a first country to page the receiving user” is capable of receiving a device ID of the receiving user and a paging message to be sent to the receiving user, from the originating user</p>
XII.B	<p>“wherein the originating user, via the website, designates a second country from a plurality of potential countries in which the receiving user is to be paged, by using country data”</p> <p>Claim 27</p>	<p>wherein the system including the website is capable of receiving country data from the originating user for designating the second country from a plurality of countries in which the receiving user is to be paged</p>
XII.C	<p>“wherein designating of the second country in which the receiving user is to receive the paging message, by the means for designating, is carried out remotely by the receiving user in the second country”</p> <p>Claim 34</p>	<p>wherein the system including the “means for designating a second country” [recited in claim 34] is capable of designating the second country by way of a remotely located phone/pager/PC (or equivalents thereof) of the receiving user</p>
XII.D	<p>“wherein the second country is designated by the receiving user via a phone”</p> <p>Claim 8</p>	<p>wherein the second country is capable of being designated by way of a phone of the receiving user</p>
XII.E	<p>“wherein designation of a country in which the receiving user is to be paged is performed remotely by at least the receiving user”</p> <p>Claim 9</p>	<p>wherein the system is capable of designating the country in which the receiving user is to be paged upon receipt of signals from at least a remotely located receiving user</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
XII.F	<p>“wherein designating by the means for designating is carried out remotely by the receiving user”</p> <p>Claim 15</p>	<p>wherein the system including the “means for designating a second country” recited in claim 11 is capable of designating the second country by way of a remotely located phone/pager/PC (or equivalents thereof) of the receiving user</p>
XII.G	<p>“wherein designation of a country in which the receiving user is to be paged is performed remotely by at least the receiving user”</p> <p>Claim 18</p>	<p>wherein the system including the “means for designating” recited in claim 16 is capable of designating the second country by way of a remotely located phone/pager/PC (or equivalents thereof) of the receiving user</p>
XII.H	<p>“wherein designating by the means for designating is carried out remotely by the receiving user via a phone”</p> <p>Claim 25</p>	<p>wherein the system including the means for designating recited in claim 21 is also capable of designating the second country by way of a remotely located phone of the receiving user</p>
XII.I	<p>“wherein designation of the second country in which the receiving user is to be paged is further carried out remotely by the receiving user”</p> <p>Claim 29</p>	<p>wherein the system is further capable of designating the second country in which the receiving user is to be paged upon receipt of signals from at least a remotely located receiving user</p>
XII.J	<p>“wherein designation of the second country in which the receiving user is to be paged is carried out remotely by the receiving user”</p> <p>Claim 33</p>	<p>wherein the system is capable of designating the second country in which the receiving user is to be paged upon receipt of signals from a remotely located receiving user</p>
XII.K	<p>“wherein the designating of the second country by the receiving user is carried out by the receiving user via a phone”</p> <p>Claim 34</p>	<p>wherein the second country is capable of being designated by the “means for designating” [recited in claim 34] by way of a phone of the receiving user</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
XII.L	<p>“wherein said designating by the means for designating in b) is carried out by the originating user when the originating user electronically messages the website, the originating user inputting the country data to the website to designate the second country”</p> <p>Claims 11 and 26</p>	<p>wherein the system including the “means for designating a second country” recited in b) [of claims 11 and 26] has a website capable of receiving an electronic message including country data input by way of the phone/PC (or equivalent thereof) of the originating user</p>
XII.M	<p>“wherein said designating of the second country is carried out at least by the originating user sending country data to the first server”</p> <p>Claim 17</p>	<p>wherein the system including the “means for designating” recited in claim 16 is capable of designating the second country at least upon receipt by the first server of country data from the phone/PC (or equivalents thereof) of the originating user</p>
XII.N	<p>“wherein the designating is performed by the originating user when the originating user electronically messages the website, the originating user inputting the country data to the website”</p> <p>Claim 21</p>	<p>wherein the system including the “means . . . for allowing an originating user to designate a page receiving country” has a website capable of receiving an electronic message including country data input by way of the phone/PC (or equivalent thereof) of the originating user</p>
XII.O	<p>“wherein said designating performed by the means for designating is carried out in the originating country by the originating user when the originating user electronically messages the website, the originating user inputting the country data to the website to designate a page receiving country”</p> <p>Claim 21</p>	<p>wherein the system including the “means . . . for allowing an originating user to designate a page receiving country” performs the designating in the originating country and has a website capable of receiving an electronic message including country data input by way of the phone/PC (or equivalent thereof) of the originating user for designating the page receiving country</p>

Term	Claim Term, Phrase, or Clause	Court's Construction
XII.P	<p>“wherein designating of the page receiving country, performed by the means for designating, is performed by the originating user via a computer”</p> <p>Claim 22</p>	<p>wherein the system including the “means . . . for allowing an originating user to designate a page receiving country” recited in claim 21 has a website capable of receiving an electronic message including the country data from a computer of the originating user</p>
XII.Q	<p>“wherein designating in b) is carried out by the originating user when the originating user electronically messages the website, the originating user inputting the country data to the website to designate the second country”</p> <p>Claim 27</p>	<p>wherein the website is capable of receiving an electronic message including country data from the originating user in performing the designating in b) to designate the second country</p>

Group XIII – Additional Alleged Invalidity

Term	Claim Term, Phrase, or Clause	Court's Construction
XIII.A	<p>“the originating user not necessarily knowing what country the receiving user is located in”</p> <p>Claims 4, 9, 30, 36</p>	<p>The system is capable of paging the receiving user regardless of whether the originating user knows which country the receiving user is located in</p>
XIII.B	<p>“the receiving user who may be located in a second country”</p> <p>Claims 4, 9, 30</p>	<p>the system will attempt to page the receiving user regardless of the receiving user's location</p>
XIII.C	<p>“the receiving user who may be located in a page receiving country”</p> <p>Claim 36</p>	<p>the system will attempt to page the receiving user regardless of the receiving user's location</p>

Group XIV – Terms With Meanings No Longer In Dispute

Term	Claim Term, Phrase, or Clause	Court’s Construction
XIV.A	“means for the receiving user confirming receipt of a paging message” Claim 6	<i>Function:</i> the receiving user confirming receipt of a paging message <i>Corresponding Structure:</i> pager
XIV.B	“means for permitting the receiving user in the second country to confirm receipt of a paging message” Claim 31	<i>Function:</i> permitting the receiving user in the second country to confirm receipt of a paging message <i>Corresponding Structure:</i> pager