IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA
Alexandria Division

GEOSCOPE TECHNOLOGIES PTE. LTD,
Plaintiff,

v.

GOOGLE LLC,
Defendant.

No: 1:22-cv-01331-MSN-JFA

MEMORANDUM OPINION & ORDER

This matter comes before the Court for claim construction. Geoscope Technologies Pte. Ltd. ("Geoscope") is the owner of six patents[1] ("Asserted Patents") purporting to improve the accuracy, efficiency, and speed of mobile device geolocation. Geoscope has sued Google LLC ("Google") and Apple Inc. ("Apple," together with Google, "Defendants") alleging infringement of the Asserted Patents.[2]

The parties have submitted stipulations as to six claims. The Court adopts those constructions as listed in the parties' stipulations. *See* (*Geoscope v. Google*, Dkt. Nos. 72, 73, 100) (*Geoscope v. Apple*, Dkt. Nos. 70, 71, 89). The parties have not reached agreement on ten claim terms and have asked this Court to construe those terms.[3] Opening claim construction briefs were filed on May 26, 2023 and responsive briefs were filed on June 9, 2023. *See* (*Geoscope v. Google*,

[1] The six patents are: U.S. Patent Nos. 7,561,104 ("the '104 Patent"); 8,400,358 ("the '358 Patent"); 8,786,494 ("the '494 Patent"); 8,406,753 ("the '753 Patent); 9,097,784 ("the '784 Patent"); and 8,320,264 ("the '264 Patent"). The Court will collectively refer to these six patents as the "Asserted Patents."

[2] Geoscope has sued Google and Apple in two separate actions alleging infringement of the Asserted Patents. The lawsuit against Apple, referenced herein as "*Geoscope v. Apple*," is case number 22-cv-1373. The lawsuit against Google, referenced herein as "*Geoscope v. Google*," is case number 22-cv-1331. For the purposes of claim construction, however, Google and Apple have submitted identical claim construction briefs in this action and made a joint presentation at the *Markman* hearing.

[3] The parties claim construction briefing addressed eleven disputed claim terms, but the parties subsequently reached an agreement on one of the disputed claim terms. *See* (*Geoscope v. Google*, Dkt. No. 100) (*Geoscope v. Apple*, Dkt. No. 89)

GOOGLE EXHIBIT 1028
Google v. Geoscope

Dkt. Nos. 74, 75, 83, 84) (*Geoscope v. Apple*, Dkt. Nos. 72, 73, 77, 78). The Court held a *Markman* hearing on July 6, 2023. Having considered the briefs, the exhibits attached thereto, and the argument of counsel at the hearing, the Court now construes the ten disputed claim terms as set forth below.

I. LEGAL STANDARDS

A. CLAIM CONSTRUCTION

The purpose of the claim construction process is to "determin[e] the meaning and scope of the patent claims asserted to be infringed." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). The question of the proper construction of a patent is a question of law, although courts must sometimes engage in subsidiary fact-finding. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837–38 (2015). Terms contained in claims "are generally given their ordinary and customary meaning." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art [("POSA")] in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). When determining the ordinary meaning of claim terms, courts do not derive meaning of terns devoid of the context from which they arose. *Id.* at 1321. Rather, courts endeavor to reflect their "meaning to the ordinary artisan after reading the entire patent." *Id.*

"When construing claim terms, the court first looks to, and primarily rel[ies] on, the intrinsic evidence, including the claims themselves, the specification, and the prosecution history of the patent." *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271, 1276 (Fed. Cir. 2013). "The claims themselves provide substantial guidance as to the meaning of particular claim terms." *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can

be highly instructive." *Id.* "Other claims of the patent in question, both asserted and unasserted, can [also] be valuable" in discerning the meaning of a disputed claim term. *Phillips*, 415 F.3d at 1314. That is so because "claim terms are normally used consistently throughout the patent," and so "the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Id.*

Moreover, a patent's "claims 'must be read in view of the specification, of which they are a part.'" *Id.* at 1315 (quoting *Vitronics*, 90 F.3d at 1582). Not only is the specification "always highly relevant to the claim construction analysis" but "[u]sually, it is dispositive [as] it is the single best guide to the meaning of a disputed term." *Id*. Courts should also consider the patent's prosecution history, as it may "inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution." *Id.* at 1317.

In certain instances, the Court may also consider extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. For instance, courts may "need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand . . . the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. While extrinsic evidence may be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Phillips*, 415 F.3d at 1317 (cleaned up).

B. INDEFINITENESS

Section 112 of Title 35 imposes a definiteness requirement on patent claims. It requires that the claims "particularly point[] out and distinctly claim[] the subject matter which the inventor . . . regards as the invention." 35 U.S.C. § 112(b). "The primary purpose of the definiteness

requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., competitors of the patent owner, can determine whether or not they infringe." *All Dental Prodx, LLC v. Advantage Dental Prod., Inc.*, 309 F.3d 774, 779–80 (Fed. Cir. 2002). "A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). As with claim construction, definiteness should be assessed from the viewpoint of a person of ordinary skill in the art at the time the patent was filed. *Id.* at 908. The party asserting indefiniteness must prove it by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). Courts, including those in this District, routinely make determinations about indefiniteness at the claim construction stage. *E.g., Bushnell Hawthorne, LLC v. Cisco Sys.*, 2019 WL 2745735, at *9 (E.D. Va. July 1, 2019).

C. MEANS-PLUS-FUNCTION

A patent claim may be expressed using functional language. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015). Under 35 U.S.C. § 112 ¶ 6, a structure may be claimed as a "means . . . for performing a specified function" and an act may be claimed as a "step for performing a specified function." *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002). When it applies, § 112 ¶ 6 limits the scope of the functional term "to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347.

"The overall means-plus-function analysis is a two-step process." *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1365 (Fed. Cir. 2022). First, the Court must "determine whether a claim limitation is drafted in means-plus-function format, which requires [the Court] to construe the

limitation to determine whether it connotes sufficiently definite structure to a person of ordinary skill in the art." *Id.* There is a rebuttable presumption that § 112 ¶ 6 applies when the claim language includes "means" or "step for" terms, and a rebuttable presumption it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326. The essential inquiry is "whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure." *Id.* at 1348. Such an inquiry turns on "[i]ntrinsic evidence, such as the claims themselves and the prosecution history," as well as extrinsic evidence. *Dyfan*, 28 F.4th at 1365–66.

If the limitation is drafted in a means-plus-function format under step one, the Court proceeds to step two, in which the Court then "determine[s] 'what structure, if any, disclosed in the specification corresponds to the claimed function.'" *Dyfan*, 28 F.4th at 1365 (quoting *Williamson*, 792 F.3d at 1351). A means-plus-function claim is indefinite if the specification fails to disclose adequate corresponding structure to perform the claimed function. *Williamson*, 792 F.3d at 1351–52.

II. CLAIM CONSTRUCTION

D. The '104, '358, and '494 Patents

The '104, '358, and '494 Patents share the same specification. These three patents generally relate to determining the location of a mobile device by comparing previously collected "calibration data" with network measurement data observed by that mobile device. Geoscope's alleged improvement over prior art involves modifying the observed data to account for varying factors that lessen the accuracy of that data.

1. "calibration data"

The first disputed term, "calibration data," appears in several claims in the '104 Patent, '358 Patent, '494 Patent, and '753 Patent (which is addressed in the subsequent section below). The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
Plain and ordinary meaning (no construction necessary) *In the alternative*, "information based on prior network measurements"	"network measurement data associated with a defined geographic location"

Geoscope argues that calibration data is a term readily understood by a POSA and requires no construction. Geoscope argues that if the Court were to construe the term, its alternative proposal finds supports in the intrinsic evidence. *See* (*Geoscope v. Google*, Dkt. No. 75) ("Pl. Br." at 10–12).[4] Specifically, Geoscope contends that the '104, '358, and '494 Patents provide different examples of calibration data—signal strength, round trip time, time difference of arrival—that are *not* network measurement data itself. Geoscope also argues that Defendants' construction does not capture that calibration data can be modified or altered. Defendants contend that the intrinsic record supports that "calibration data" is itself "network measurement data" that *must be* associated with a known or defined geographic location. *See* (*Geoscope v. Google*, Dkt. No. 74) ("Defs. Br." at 3–4); *see also* (*Geoscope v. Google*, Dkt. No. 78) ("Defs. Resp." at 4). The parties' disagreement turns on two distinct issues: (1) whether "calibration data" is limited to "network measurement data" only, as opposed to encompassing information that is *based on* network measurements, and (2) whether the data must be associated with a geographic location.

Regarding the first of these disagreements, the intrinsic record supports the construction

[4] As noted above, Defendants filed identical briefs on claim construction. Plaintiff has also filed identical briefs in the Google and Apple actions. For ease of reference, the citations to claim construction briefing in this Order are only to the briefs filed in the Google docket.

that the disputed claim term refers to "network measurement data." That "calibration data" refers to "network measurement data" is consistent with how the technology functions as described in the claims and specification. The patents purport to improve the location accuracy of a mobile device by collecting "calibration data" at defined, known locations, which are then stored in a database for further use. *See* Ex. B at 1:21–3:11, 11:65–12:15. When network measurement data is then collected at *unknown* locations, it is compared to the calibration database at the known location as a means to estimate the mobile device's location. As Defendants argue, the specification contemplates that this comparison be an apples-to-apples comparison—that is, the network measurement data from an unknown location can only be compared to other previously collected network measurement data.

Plaintiff asserts that the patent contemplates several examples of calibration data. The language identified by Plaintiff suggests that the geolocation of a mobile device "may require one or more types of calibration data associated with the mobile station (e.g., signal strength, round trip time, time difference of arrival (TDOA), etc.)." Pl. Br. at 10 (citing Ex. B at 1:23–24). But these examples of calibration data are all network measurement data; Plaintiff has not identified calibration data that *is not* network measurement data. Accordingly, contrary to Plaintiff's assertion, Defendants' construction does not exclude disclosed embodiments. Moreover, network measurement data need not be unaltered; indeed, Defendants concede that such data can be modified and still fall within their construction. At the hearing, Defendants proffered a clarification on their construction that would account for this distinction: "modified or unmodified network measurement data . . . ." (*Geoscope v. Google*, Dkt. No. 104) ("Hrg. Tr." at 148:13). Plaintiff also suggests that a statement made during prosecution confirms "calibration data" and "network measurement data" are not the same. Pl. Br. at 11. But the passage Plaintiff cites distinguishes between *observed* network measurement data from calibration data; such a distinction makes sense

because *observed* data is in fact distinct from the data that has already been collected and stored.

With respect to the second of the parties' disagreements—whether calibration data must be associated with a defined geographic location—the intrinsic evidence supports a construction that tethers data to a geographic location. Reading the claim in light of the specification and the purpose of the patent, calibration data must be associated with a known geographic location. Indeed, the very purpose of calibration data is to inform what location to report when a match is found. Plaintiff's construction, however, would read the meaning of the term "calibration" out of the term. A construction associating calibration data with a geographic location finds ample support in the specification, which the Federal Circuit has explained is the "single best guide to the meaning of a disputed term." *See Phillips*, 415 F.3d at 1315. The specification for the '104 Patent describes, for example, the calibration database as "a collection of data from . . . grids that contain network measurements with associated location estimates." Ex. B at 10:55–58. This language also supports the fact that calibration data need not be associated with a *defined* geographic location, as it contemplates such data can be associated with location *estimates.* Defendants appear to recognize that distinction in their Response brief. *See* Defs. Resp. at 5 (stating that quoted passage supports Defendants' position that calibration data is network measurement data associated with specified locations, "whether precisely defined or estimated."). Accordingly, the Court adopts Defendants' construction in part, with the modifications indicated below, for the reasons stated above.

Final Construction
"modified or unmodified network measurement data associated with a geographic location"

2. "observed network measurement data"

The second disputed term, "observed network measurement data," appears in several claims of the '104 Patent, '358 Patent, and '494 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
Plain and ordinary meaning (no construction necessary) *In the alternative*, "measurement data representing at least one network characteristic observed by a mobile device"	"measurement data from a network measurement report (i.e., a report used in cellular networks which provides the results of a measurement from a mobile device on one or more cells)"

Plaintiff argues that this claim term requires no construction. In the alternative, Plaintiff proposes a construction it believes to comport with the intrinsic evidence. *See* Pl. Br. at 6–7 (citing language from the specification of the '104 Patent and statements made during reexamination before the USPTO). Defendants argue that their construction is also supported by the intrinsic evidence, which they argue makes clear that the purported invention of the '104 Patent Family is the use of a "network measurement report" ("NMR") obtained by a cellular device to determine a mobile device's location. Def. Br. at 5–8.

The core disagreement between the parties is whether "observed network measurement data" encompasses more than just cellular network data. Looking at the word "network" in isolation *could* certainly lend itself to encompass networks other than cellular networks. Plaintiff's construction requires the Court to interpret the word "network" in isolation, devoid of the context of the teachings of the patent. But the Court's "inquiry is not limited to an analysis of the phrase in isolation." *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 793 (Fed. Cir. 2021) (cautioning against "break[ing] down a phrase and giv[ing] it an interpretation that is merely the sum of its parts"). Here, the specification frequently uses "network measurement data" interchangeably with a

"network measurement report." For instance, in describing figure 6 of the '104 Patent, the specification states that operation 601 refers to when "A *NMR* may be obtained." Ex. B 10:26 (emphasis added). The corresponding step 601 in Figure 6 states "Obtaining *NM Data*." Ex. B, Fig. 6 (emphasis added). A POSA would therefore understand that the "observed network measurement data" is obtained from NMRs. *See Mosaic Brands, Inc. v. Ridge Wallet LLC*, 55 F.4th 1354, 1362 (Fed. Cir. 2022) (finding "lip" to mean "extrudable plastic materials" where the patent made clear that the device "is constructed of extrudable plastic materials"); *Kaken v. Pharm. Co. v. Iancu*, 952 F.3d 1346, 1352 (Fed. Cir. 2020) ("A patent's statement of the described invention's purpose informs the proper construction of claim terms."). And the testimony of one of the inventors—agreeing that observed network measurement data refers to "data from a network measurement report"—supports this conclusion. *See* Ex. R at 231:20–232:10.

Plaintiff asserts that "observed network measurement data" cannot merely consist of data in the NMR because the specification of the '104 Patent states that "[t]he observed data would typically be the same or ***similar to*** the data in a network measurement report (NMR)." Pl. Br. at 8 (citing Ex. B at 9:42–44). This, Plaintiff argues, suggests that the observed data would not be limited to just the data in the NMR. But, as Defendants argued at the hearing, reading this in light of the claim and specification as a whole, the intent behind the language is to convey to a POSA that the observed data need not include *all* the data in the NMR—that is, it need not be *precisely the same as* the data from an NMR. Accordingly, the Court adopts the Defendants' construction:

Final Construction
"measurement data from a network measurement report (i.e., a report used in cellular networks which provides the results of a measurement from a mobile device on one or more cells)"

3. "positioning determining equipment"

The third disputed term, "positioning determining equipment," appears in claims 1 and 41 of the '358 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
"equipment that processes received information to locate a position of a mobile device" Should 35 U.S.C. § 112 ¶ 6 apply: Function: comparing said modified network measurement data with said database of calibration data to thereby determine the location of the mobile station Structure: a processor, microprocessor or ASICS, including but not limited to those implementing the algorithms of Figs. 2-3, 7-10, specifically steps 202-203, 303, 304, 307, 309, 707, 807, 909, 1005, 1007, 1009, and described textually at 2:12-14, 2:24-28, 2:38-40, 2:63-67, 3:2-13, 4:49-61, 6:20-21, 6:60-62, 7:44-48, 8:4-9:16, 9:26-34, 9:35-50, 9:58-64, 10:3-8, 11:13-17, 11:29-31, 11:40-44 and 11:50-61, and structural equivalents	Subject to 35 U.S.C. § 112 ¶ 6. Function: "comparing said modified network measurement data with said database of calibration data" Structure: Indefinite

Claim 1 of the '358 Patent states:

> What is claimed is:
> 1. A method for determining a location of a mobile station, comprising:
> providing a database of previously-gathered calibration data for a predetermined region in a wireless network;
> collecting observed network measurement data;
> modifying said observed network measurement data; and
> comparing said modified network measurement data with said database of calibration data by positioning determining equipment to thereby determine the location of the mobile station.

Defendants argue that "positioning determining equipment" in the "comparing" step of claim 1 is a means-plus-function term that must be construed under 35 U.S.C. § 112 ¶ 6. Defendants argue that the term is described in purely functional terms, and that "equipment" is not sufficiently detailed to render the terms sufficient—or, in other words, the disclosed structure is not sufficient to reasonably associate with the claimed function. Indeed, the term could refer to *any* structure that is capable of performing the claimed function. *See* Defs. Br. at 10–12. Plaintiff argues that the specification describes how positioning determining equipment receives modified NMD and compares that NMD with a database of calibration data to determine the location of a mobile device. Under Plaintiff's theory, a POSA would understand the term to mean "equipment that processes received information to locate a position of a mobile device." Pl. Br. at 12–13.

As discussed above, the means-plus-function analysis is a two-step process. The first step requires the Court to "determine whether a claim limitation is drafted in means-plus-function format, which requires [the Court] to construe the limitation to determine whether it connotes sufficiently definite structure to a person of ordinary skill in the art." *Dyfan*, 28 F.4th at 1365. On this first question, the Court finds that the claim term at issue here—"positioning determining equipment"—is drafted in a means-plus-format function. At the outset, the Court presumes that § 112 ¶ 6 does not apply because the disputed limitation does not recite "means." *Williamson*, 792

F.3d at 1348. In the absence of the word "means," Defendants therefore bear the burden of demonstrating by a preponderance of the evidence that the "positioning determining equipment" term fails to recite sufficiently definite structure. When a patent claim term lacks the word "means," "the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Williamson*, 729 F.3d at 1348. "[E]ven in the absence of terms such as 'means,' claims are nevertheless subject to § 112 ¶ 6 when the limitation in question has 'no commonly understood meaning and is not generally viewed by one skilled in the art to connote a particular structure.'" *Dyfan*, 28 F.4th at 1366 (quoting *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015)). Indeed, "[g]eneric terms such as 'mechanism,' 'element,' 'device,' and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word 'means' because they 'typically do not connote sufficiently definite structure' and therefore may invoke § 112, para. 6." *Williamson*, 729 F.3d at 1350. Here, the term "equipment" is a generic term similar to the terms "mechanism," "element," and "device," which the Federal Circuit has described as nonce words. Accordingly, although the disputed term does not recite "means" and thus is presumed not to be a means-plus-function limitation, that presumption is much weaker given the use of the nonce word "equipment." Moreover, the parties have offered no evidence that the term has a commonly understood meaning and is not generally viewed by one skilled in the art to connote a particular structure. And the '358 Patent's claims and specification describe the claim term in functional terms without any corresponding structure: the "positioning determining equipment" term is recited several times in the specification, but those disclosures do not "connote[] sufficiently definite structure to a person of ordinary skill in the art." *See Dyfan*, 28 F.4th at 1365. The Court finds that Defendants have demonstrated by a preponderance of evidence

that the disputed term, "positioning determining equipment," is drafted in a means-plus-function format.

Having so concluded, the Court moves to the second step, which requires it to determine "what structure, if any, disclosed in the specification corresponds to the claimed function." *Williamson*, 792 F.3d at 1351. Here, the parties appear to generally agree on the claimed function: "comparing said modified network measurement data with said database of calibration data." Hrg. Tr. at 72:6–11; Defs. Br. at 8; Pl. Br. at 12. The Federal Circuit has stated that "[i]f the function is performed by a general-purpose computer or microprocessor, then th[is] second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function." *Rain Computing, Inc. v. Samsung Elecs. Am., Inc.*, 989 F.3d 1002, 1007 (Fed. Cir. 2021). Here, Plaintiff identifies the corresponding structure to be a general-purpose computer—a "processor, microprocessor, or ASICS"—as well as algorithms represented in multiple figures in the specification and described in the text of the specification. *See* Pl. Br. at 12. At the hearing, Plaintiff referred to the specification discussing "a number of different formats, different algorithms that could be performed on that competing structure to accomplish the claimed function." Hrg. Tr. at 72:18–20. But the parts of the specification Plaintiff identified are *not* algorithms that a general-purpose computer can execute. For instance, Plaintiff identifies "the algorithms of Figs. 2–3, 7–10," as providing the structure for this means-plus-function term. Some of these figures are reproduced below.

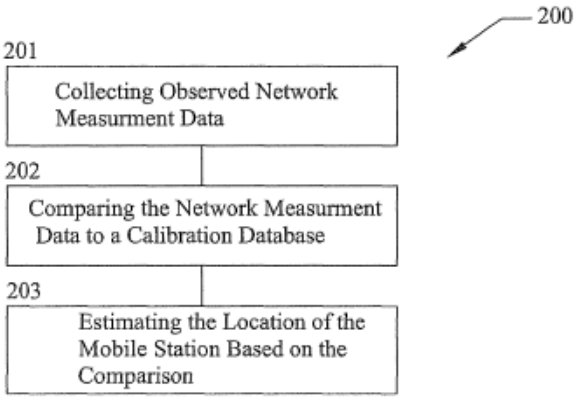


Figure 2

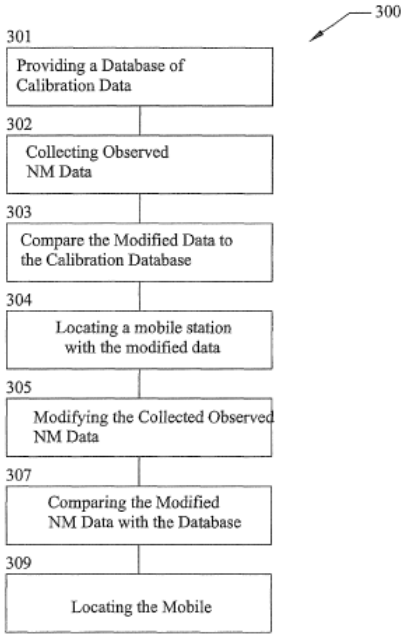


Figure 3

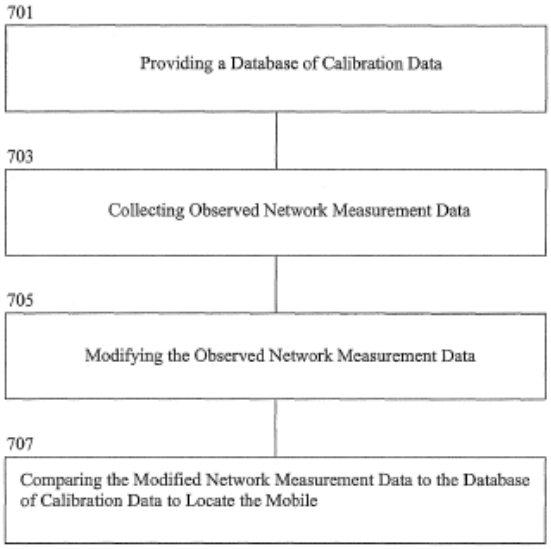


Figure 7

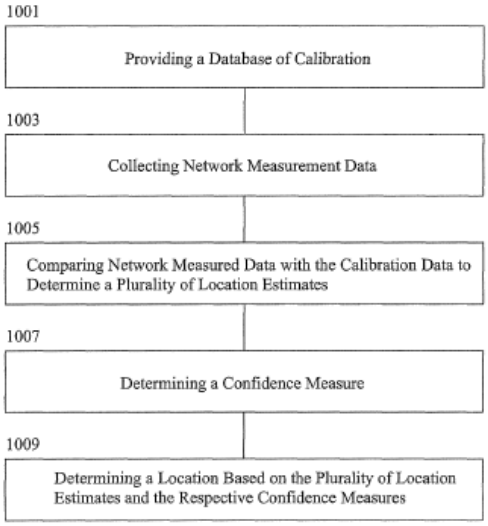


Figure 10

These figures are merely flow charts describing other functions to be executed. At the hearing, Plaintiff referred to these flow charts as representing "higher level" structures that provided corresponding structure to the function, but it is unclear how a POSA would understand these flow charts to provide any semblance of structure by which the claimed function is to be performed. And the textual descriptions identified by Plaintiff fare no better. For instance, the excerpted

language from the specification at '384 Patent depicted by Plaintiff at the *Markman* hearing and referenced in its brief refers to "confidence measures" that "may be based on one or more calculated parameters, including, but not limited to: a probability density function (PDF), a joint PDF, Mahalanobis distance, distortion measure, ordered number parameter, timing advance (TA) parameter, mobile orientation etc." Ex. D at 8:34–38. As with the figures, these are not algorithms. Because the intrinsic evidence therefore fails to disclose adequate corresponding structure to perform the claimed function," the term "positioning determining equipment" is indefinite. *See Williamson*, 792 F.3d at 1351–52. Accordingly, the Court adopts the following construction.

Final Construction
Subject to 35 U.S.C. § 112 ¶ 6. **Function: "comparing said modified network measurement data with said database of calibration data"** **Structure: Indefinite**

E. '753 Patent

The '753 Patent involves purported improvements to routine and conventional methods of geolocation using "grid points" based on calibration data. The purported improvement upon conventional techniques is that the claimed invention uses calibration data to generate additional grid points that could be selected from and used to determine the location of a mobile device. Specifically, the '753 Patent first provides a set of "calibration data" at specific "calibration points"

in a given region. Ex. E, 2:21–50. The system then generates one or more "grid points" from the calibration data. *Id.* Using these grid points, the system determines the location of a mobile device.

1. "network measurement report"

The fourth disputed term, "network measurement reports," appears in claims 1, 7, and 32 of the '753 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
"collection of data associated with a wireless communication network or mobile device"	"a report used in cellular networks which provides the results of a measurement from a mobile device on one or more cells"

Plaintiff argues that its definition tracks the purpose of the '753 Patent—that the claimed invention relates to the "problem of estimating the location of a wireless mobile device using information from one or more" NMRs that may be generated by a wireless communications network or the mobile device. Pl. Br. at 17. Plaintiff argues that the intrinsic evidence does not limit the definition any further. Defendants argue that the '753 Patent uses "network measurement report" as it is used in the art, and that Defendants' construction reflects that usage.

The '753 Patent demonstrates that the patentee intended to use the term as was known in the art: The specification expressly states that "calibration data may be contained within a Network Measurement Report ("NMR") *as is known in the art* or the calibration data may be contained using other known methods." Ex. E at 9:53–56 (emphasis added). Defendants have presented ample evidence—expert testimony (Ex. A ¶¶ 64–70), inventor testimony (Ex. R at 231:6–11; Ex. P at 294:11–14), and a contemporaneous document from the Open Mobile Alliance (Ex. A1 at 21)—demonstrating that, as of the date of the patent filing, the term "network measurement reports" was known in the art to be a report used in cellular networks that includes measurements made by a mobile device on the surrounding cell towers. Plaintiff's only evidence about how a

POSA would understand the term of art is a technical paper that is of limited value because it was published years after the priority date of the '753 Patent. *See* Ex. 7; *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2003) (declining to consider extrinsic evidence that is "not contemporaneous with the patent" because it did not reflect the meanings a POSA would have attributed to the words at the time the patent was granted).

Not only does Plaintiff fail to offer contemporaneous evidence of its construction of the term, but Plaintiff's construction is unreasonably expansive—it would encompass *any* collection of data associated with a wireless communication network or mobile device, regardless of whether the data represents a "network measurement." Although Plaintiff identifies some reference in the specification to "wireless mobile devices" as evidence that an NMR encompasses data beyond cellular networks, Pl. Br. at 18, it cannot point to any reference to an NMR generated over WiFi or any other wireless mobile device that can be geolocated using a technique other than over cellular network. At bottom, one of ordinary skill in the art would not understand an NMR to include cellular networks upon a review of the claims and specification. Accordingly, the Court adopts Defendants' construction.

Final Construction
"a report used in cellular networks which provides the results of a measurement from a mobile device on one or more cells"

2. "grid point"

The fifth disputed term, "grid point," appears in several claims of the '104 Patent, '358 Patent, '494 Patent, and '753 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
"locations or areas that are determined and associated with a particular set or sets of calibration data"	"a point associated with representative calibration data for an area"

Plaintiff argues that the Abstract of the '753 Patent provides a "near-definitional statement" of this disputed claim term, and that its construction is derived from that text. Pl. Br. at 14. Defendants argue that the specifications of the '753 Patent and related '104 Patent Family contemplate a grid point to be a single point that is representative of the calibration data for an area. *See* Defs. Br. at 15–17. Under the proposed constructions, the parties agree that a grid point encompasses an area. But there are two core disagreements: (1) whether the term can refer to a *location*, and (2) whether a grid point is "representative" of or "associated with" calibration data.

Plaintiff argues that its proposed construction is "near-definitional" language taken from the Abstract of the '753 Patent, which states, in relevant part:

> The location of a wireless mobile device may be estimated using, at least in part, one or more pre-existing Network Measurement Reports ("NMRs") which include calibration data for a number of locations within a geographic region. *The calibration data for these locations is gathered and analyzed so that particular grid points within the geographic region can be determined and associated with a particular set or sets of calibration data from, for example, one or more NMRs*.

Ex. E at Abstract (emphasis added). But the italicized language from which Plaintiff's construction is drawn is directed more toward what *must be done* to arrive at a grid point or set of grid points rather than what a grid point *is*. The specification of the '104 Patent, sibling to the '753 Patent, *does* provide a clear indication of the meaning of "grid point"—or a Non-uniform grid point ("NUG"): "NUGs represent an area of collected calibration data." Ex. B at 3:56–60; *see Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1375 (Fed. Cir. 2007) (considering specification of sibling patent where the claims had same scope). The specification also describes NUGS as "represent[ing] the signal characteristics and/or calibration data over a given region." Ex. B at

3:50–52. Drawing from this language, the Defendants propose that "grid point" should be construed as "a point associated with representative calibration data for an area." Plaintiff argues that the "representative calibration data" language from Defendants' construction is not used anywhere in the Asserted Patents, and that their construction is not grounded in the language found in the intrinsic evidence. Pl. Br. at 16. But Defendants' use of "representative calibration data" is intended to reflect that the defining characteristic of a NUG region—as explained in the specifications of the '753 Patent, '104 Patent, and '748 Patent—is that the data points within an area are all "statistically very similar" such that each of the grid points within the NUG region can represent the overall NUG. *See* Ex. B at 3:56–60; Ex. E at 10:29–11:7; Ex. F at 6:22–28. Accordingly, the Court adopts the following construction:

Final Construction
"a point associated with representative calibration data for an area"

3. "evaluating said at least one network measurement report with each of said sets of grid points as a function of select ones of said characterizing parameters"; "evaluate said at least one network measurement report with each of said sets of grid points as a function of select ones of said characterizing parameters"

The sixth disputed term, "evaluating said at least one network measurement report with each of said sets of grid points as a function of select ones of said characterizing parameters" appears in claim 1 of the '753 Patent. Claim 32 of the '753 Patent includes the same claim term but uses "evaluating" instead of "evaluate." The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
Plain and ordinary meaning (no construction necessary) *In the alternative*, "analyzing the collection of data associated with a wireless communication network or mobile device based on information"	Indefinite

Claim 1 of the '753 Patent states as follows:

> We claim:
> 1. A method for determining the location of a mobile device in a geographic region comprising the steps of:
> (a) providing calibration data for each of one or more calibration points in a geographic region, said calibration data having one or more characterizing parameters;
> (b) generating one or more sets of grid points for said calibration data;
> (c) receiving at least one network measurement report from a mobile device at an unknown location in said geographic region;
> (d) evaluating said at least one network measurement report with each of said sets of grid points as a function of select ones of said characterizing parameters;
> (e) selecting a set of grid points as a function of a predetermined criteria; and
> (f) determining the location of a mobile device in said geographic region as a function of said selected set of grid points.

At dispute is subsection (d) of the claim—the "evaluating" step. Plaintiff argues that a POSA would understand the "evaluating" step as involving analysis of data from the NMRs and grid points based on "characterizing parameters." Pl. Br. at 18–20. Plaintiff states that a POSA would understand "characterizing parameters" to mean "information associated with a signal or network." Pl. Br. at 18. Defendants argue that the "evaluating" step is indefinite. Under Defendants' theory, a POSA would not understand the bounds of the terms "evaluate" and "characterizing parameters" with reasonable certainty because, beyond certain exemplary characterizing parameters recited in dependent claims, the intrinsic evidence provides little evidence about what it means to "evaluate" an NMR as a function of "characterizing parameters." Defs. Br. at 18–20.

"[P]atent claims with descriptive words . . . must provide objective boundaries for those of skill in the art in the context of the invention to be definite." *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1349 (Fed. Cir. 2022) (cleaned up). "[T]he intrinsic record—the patent's claims, written description, and prosecution history—along with any relevant extrinsic evidence can provide or help identify the necessary objective boundaries for claim scope." *Id.* The Federal Circuit has concluded that where descriptive terms are at issue, "examples in the written description"—including in dependent claims—may "help[] provide sufficient guidance to render the claims not invalid as indefinite." *Niazi*, 30 F.4th at 1349–50 (exemplary resilient materials in dependent claims provided POSA guidance as to boundaries of term "resilient" in claim).

Here, claims that are dependent on claim 1 of the '753 Patent provide a POSA with specific examples of what the "evaluating" step might encompass. For instance, claims 10, 21, 22, 23, and 24 of the '753 Patent each provide examples of what "the step of evaluating" in the method of claim 1 "further comprises." As just one example, claim 24 states that the method of claim 1 "wherein the step of evaluating further comprises: (i) matching cell power ordering of cells neighboring a cell serving said mobile device in said network measurement report to neighboring cell power ordering of grid points in said geographic region; and (ii) selecting an estimated location as a function of a quality of said matching, wherein said quality is a function of a relative shift in an ordering sequence occurring between said network measurement report and grid point cell power ordering." Ex. E at 62:28–38. These exemplars provide guidance to inform those skilled in the art about the scope of the "evaluating" step with reasonable certainty. *See Lone Star Tech. Innovations, LLC v. Asustek Computer Inc.*, No. 6:19-cv-00059, 2020 WL 6811484, at *16 (E.D. Tex. July 31, 2020) (finding "evaluating" and "evaluated" sufficiently definite and construing the words in accordance with their plain and ordinary meaning); *Canon, Inc. v. TCL Electronics*

Holdings Ltd., No. 2:18-CV-546, 2020 WL 2098197, at *37–40 (E.D. Tex. May 1, 2020) (rejecting argument that "evaluating a degree of suitability" was indefinite).

Moreover, a POSA would understand the boundaries of the "characterizing parameters" referenced in the "evaluating" step. The specification discusses "exemplary characterizing parameter[s]" to include: "signal strength for a signal transmitted by a transmitter having a known location as received by a receiver at the grid point, signal strength of a signal transmitted by a transmitter located at the grid point as received by a receiver at a known location, round trip time for a signal traveling between the grid point and a known location, timing advance of a signal received by the mobile device at the grid point, time difference of arrival of plural signals at the grid point with respect to a pair of known locations as measured by a receiver at the grid point or at the known locations, the identification of a serving cell or serving sector of the mobile device located at the grid point, a state of a wireless network serving the mobile device, and combinations thereof." Ex. E at 51:42–58. Although Defendants argue that because this is a non-exhaustive list, it does not establish the bounds for a claim term, *see* Defs. Br. at 19, the Court finds that the detailed explanation of exemplary parameters identification in the specification would allow a POSA to understand the scope of "characterizing parameters" to be evaluated with reasonable certainty. Indeed, the definiteness requirement "mandates clarity" but "recogniz[es] that absolute precision is unattainable." *Nautilus*, 572 U.S. at 910.

The Court therefore finds that the descriptive term "evaluating said at least one network measurement report with each of said sets of grid points as a function of select ones of said characterizing parameters," when viewed in light of the specification informs those skilled in the art about the scope of the term with reasonable certainty. Defendants have failed to prove by clear and convincing evidence that the term is indefinite. Accordingly, the Court adopts the plain and ordinary meaning of this term.

Final Construction
Plain and ordinary meaning

F. ’784 Patent

The ’784 Patent concerns collecting data for a calibration database. According to the Patent, the database is comprised of collected data that relate to a wireless device and can be used to detect its location. This data, however, can be inaccurate for many reasons (i.e., poor satellite visibility). The claimed invention purports to modify and replace the data with data believed to be more accurate; it involves using data about the locations of streets to verify and improve calibration data that can be used for geolocation. The claimed invention is that it improved upon conventional methods by using the locations of streets in an area (and ancillary information about those streets) as supplemental information to check the integrity of the calibration data.

1. “in proximity”

The seventh disputed term, “in proximity,” appears in several claims of the ’784 Patent. The parties have proposed the following constructions:

Plaintiff’s Construction	Defendants’ Construction
Plain and ordinary meaning (no construction necessary)	Indefinite

Claim 1 of the ’784 Patent states as follows:

> What is claimed is:
> 1. A method for generating a calibration database, comprising:
> receiving at a wireless device an attribute of a signal transmitted by a wireless transmitter to a mobile station in a region;
> wirelessly transmitting from said wireless device said attribute to a controller unit;

> obtaining location data of a plurality of geographic locations situated within said region, wherein said location data is determined using said wireless device, and
> wherein said region contains plural streets and intersections of said plural streets;
> providing a location information database wherein said location database includes latitude and longitude information for each of a plurality of points within said region;
> determining a status of said wireless device;
> determining from said status a most likely one of said plural streets upon which said wireless device is located;
> determining said most likely street as a first one of said plural geographic locations;
> determining a first point of said plural points that is in proximity to said first geographic location; and
> entering said first point in said calibration database and associating the location data for the first one of said plural geographic locations determined by said wireless device with the first point.

Ex. F at 9:16–43. This claim has four "determining" steps. The fourth of the "determining" steps requires one to "determine[e] a first point of said plural points that is in proximity to said first geographic location." The parties disagree over the construction of the term "in proximity" within that "determining" step. Plaintiff argues that a POSA would "understand that the method involves determining a point that must be sufficiently 'in proximity' to '[the] first geographic location' such that verification and improvement of the calibration data can be obtained." Pl. Br. at 30. Defendants, on the other hand, argue that the '784 Patent lacks guidance as to the bounds of the term and that a POSA would have no way to determine whether they are within or outside the scope of the element. Defs. Br. at 21. This, they argue, renders the claim term indefinite.

"Claim language employing terms of degree"—such as "in proximity" here—"has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014). Therefore, to be sufficiently definite, terms of degree within claims must "provide objective boundaries" to a POSA when "read in light of the specification and the prosecution history." *Id.* at

1370–71. The definiteness requirement "mandates clarity" but "recogniz[es] that absolute precision is unattainable." *Nautilus*, 572 U.S. at 910.

Here, the term "in proximity" does not inform a POSA about the scope of the invention with reasonable certainty. The claims, specification, and prosecution history are devoid of any objective boundary by which a POSA would understand the term, and Plaintiff has failed to identify any such boundaries—or *any* particularized guidance—from the intrinsic evidence that would enable a POSA to understand, with reasonable certainty, what "in proximity" could mean in the context of the invention. Indeed, as Defendants point out, the term "in proximity" appears only four times in the specification; in none of those instances does the specification provide any specific guidance about what "in proximity" might mean. *See* Ex. F. at 2:16–20, 2:33–35, 2:44–48, 8:66–9:2. Where, as here, clear guidance about the bounds of a term of degree are lacking in the intrinsic evidence, courts have found those terms of degree indefinite. *Interval Licensing*, 766 F.3d at 1371–73 ("unobtrusive manner" found indefinite); *Abdou v. Alphatec Spine, Inc.*, 2014 WL 6611422, at *8–9 (S.D. Cal. Nov. 19, 2014) (holding term "proximity" to be indefinite where nothing in the claim or specification provided POSA with understanding of spatial relationship or proximity should be); *Neurografox Patent Litig.*, 201 F. Supp. 3d 206, 222–23 (D. Mass. 2016) (holding term "near said exciting and output arrangement" to be indefinite).

Plaintiff argues that a POSA would understand the meaning and scope of the term in the context of the claimed invention. Because the purpose of the claimed invention is to improve calibration data use for mobile device geolocation, Plaintiff argues, a POSA would "understand that the method involves determining a point that must be sufficiently 'in proximity' to '[the] first geographic location' such that verification and improvement of the calibration data can be obtained." Pl. Br. at 30. Plaintiff relies on two cases finding terms of degree sufficiently definite: *Mentor Graphics Corp. v. EVE-USA, Inc.*, 851 F.3d 1275 (Fed. Cir. 2017) (finding "near"

definite), and *Advanced Steel Recovery, LLC v. X- Body Equip., Inc.*, No. 2:12-cv-01004, 2013 WL 4828152 (E.D. Cal. Sept. 9, 2013) (finding "in proximity to" definite). *See* Pl. Br. at 29–30; (*Geoscope v. Google*, Dkt. No. 83) ("Pl. Resp." at 22). *Advanced Steel*, however, relied on the "insolubly ambiguous" standard for indefiniteness that was later rejected by the Supreme Court. *See Advanced Steel*, 2013 WL 4828152, at *16; *Nautilus*, 572 U.S. at 910 (rejecting "insolubly ambiguous" standard for definiteness). In *Mentor Graphics*, the Federal Circuit found the term "near" sufficiently definite relying on the patent's purpose and clear language and guidance in the specification about what the term meant. There, one of the patent's goals was to aid developers when debugging HDL source code. 851 F.3d at 1291. The patent disclosed a method for displaying results of a circuit analysis visually "near" the HDL source specification that generated the circuit. *Id.* The Federal Circuit held the term "near" to be sufficiently definite because a POSA would understand that the circuit analysis results would need to be related to corresponding HDL code such that the pieces of information were placed "near" each other on the display screen to compare. *Id.* That logic does not follow here where the very nature of the claimed invention is to improve the geolocation of mobile devices, and so *some* precision would be expected when describing the metes and bounds of when the "plural points" are "in proximity" to the "first geographic location." The plural points could be anything from one foot to one mile away from the first geographic location, but because the specification and prosecution history lack any particularized guidance about what "in proximity" means in the context of the invention, a POSA would have no way of knowing whether both, only one, or neither of those distances would fall outside the scope of the element. And, unlike here, the specification in *Mentor Graphics* "provide[d] examples of HDL displayed near the corresponding circuit," which the Federal Circuit found "support[ed] the

conclusion that skilled artisans would understand the meaning of 'near' with reasonable certainty." 851 F.3d at 1292–93. Accordingly, the Court finds "in proximity" to be indefinite.

Final Construction
Indefinite

2. "determining said most likely street as a first one of said plural geographic locations"

The eighth disputed term, "determining said most likely street as a first one of said plural geographic locations" appears in several claims in the '784 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
Plain and ordinary meaning (no construction necessary)	Indefinite

As discussed above, there are four "determining" steps in Claim 1 of the '784 Patent. The parties ask this Court to construe the third "determining" step: "determining said most likely street as a first one of said plural geographic locations." Defendants argue that the third "determining" step—an addition proposed by the patent examiner, *see* Ex. K—makes no sense in the context of the claim, is inoperable, and thus indefinite as a matter of law. The Court agrees. The Court begins with the presumption that the patent examiner would not introduce an indefinite claim when proposing an amendment to a claim for the purpose of putting the application in a condition for allowance. *See Tinnus Enterps., LLC v. Telebrands Corp.*, 733 F. App'x 1011, 1019–20 (Fed. Cir. 2018). But this presumption does not save Plaintiff's claim here because the Court cannot construe

a claim when it cannot decipher its meaning from the language of the claim, the specification, or other intrinsic evidence.

First, the third "determining" step is repetitive, as it requires one to determine the most likely street upon which a wireless device is located *twice* in the same claim. The earlier "obtaining" step of the claim requires that the location data for a plurality of geographic locations be determined. After that location data is obtained, the first "determining" step requires determining the status of the wireless device. The second "determining" step then requires determining, based on that status of the wireless device, the "most likely one of said plural streets" upon which the wireless device is located. As of the second "determining" step, then, the most likely street has been determined. But the third "determining" step then requires that the "most likely street" be determined *again*.

Second, the third "determining" also advances a method for obtaining the "most likely street" that is different than the one already recited earlier in the claim. Under the second "determining" step, the most likely street is determined "from said status" of the wireless device. But the third "determining" step sets forth an entirely new method of determining the most likely street—from the "first one of said plural geographic locations." It cannot be the case that the most likely street upon which a wireless device is located is determined by two different methods, with no subsequent step that addresses any inconsistency between these two methods.

Plaintiff's opening brief offers little guidance about the plain and ordinary meaning of the term, as it simply repeats the words of the claim without explanation. *See* Pl. Br. at 29. In its response brief and at the Markman hearing, Plaintiff argues that it would be clear to a POSA what is required in third "determining" step—associating one of the plural geographic locations where data was collected in the "obtaining" step with the most likely street that was determined in the prior step (the second "determining" step). Pl. Resp. at 21. But even Plaintiff's counsel conceded

at the *Markman* hearing that the third "determining step was "not . . . artfully worded" and that perhaps the word "associat[ed]" should have been used instead. Hrg. Tr. at 128:17, 21.

Inventor testimony only supports the conclusion from the intrinsic evidence that the third "determining" step has no meaning. One of the inventors, John Carlson, testified that he was "not really sure what [the third determining] step means," and that it was difficult for him to understand that step. Ex. R at 121:19–22. Another inventor who was deposed, Selcuk Mazlum, testified that he could not understand the meaning of the determining step. Ex. P at 190:4–18 (testifying that he was "lost" when reading the third determining step and that the language used "isn't clear"). Accordingly, the Court finds that the claim term "determining said most likely street as a first one of said plural geographic locations" is indefinite as a matter of law.

Final Construction
indefinite

G. '264 Patent

The '264 Patent describes and claims systems and methods for determining the "path loss" value of a wireless signal that is transmitted by a wireless device and received by a receiver. "Path loss" is a measure of signal attenuation and is the difference between the transmitted signal power and the received signal power. The '264 Patent purports to improve on conventional methods for determining path loss values for geolocation purposes by enabling path loss values by using an

active communication channel as opposed to a distinct channel dedicated specifically to making such determinations.

1. "wireless device"

The ninth disputed term, "wireless device," appears in claims 1, 11, and 13 of the '264 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
"device capable of communicating using a wireless network" [including a wireless transmitter, radio frequency transmitter, mobile telephone, cellular telephone, text messaging device, portable computer, laptop computer, personal digital assistant, vehicle security device, vehicle tracking device and pager][5]	"a mobile device configured to communicate while unattached to any physical wires"

Claim 1 of the '264 Patent states in part:

> 1. A method for determining a path loss value of a signal transmitted from a wireless device and received by a receiver, where the wireless device and the receiver operate within a wireless communication system having at least one cell having at least one sector operating on at least one frequency channel, the method comprising the steps of:

Ex. G. at 6:41–46.

Plaintiff argues that the intrinsic evidence focuses on the *communication* of the wireless device with a receiver. Given this apparent focus on the wireless communication capability of the wireless device, Plaintiff argues that "wireless device" should be defined based on the capability of a device to communicate using a wireless network. Pl. Br. at 22. Defendants argue that a POSA would understand the term "wireless device" to be a mobile device configured to communicate while unattached to any physical wires. Defendants argue that the patent requires that a

[5] Plaintiff has stated that the list of exemplary "wireless devices" in its proposed construction is included for purposes of clarity but that it does not propose that it is a necessary part of its construction. *See* Pl. Br. at 21 n. 6.

measurement of path loss on "a signal transmitted from a wireless device and received by a receiver," and that Plaintiff's construction eliminates the directional aspect of the claim.

The Court agrees with Defendants. Plaintiff's justification for its construction focuses on the overall "communication" system described in the claimed invention rather than the device itself. This construction, however, would collapse the distinction between a "wireless device" and a "receiver." The specification provides a list for what devices fall under either category. A cellular base station is listed as a receiver in the specification as an example of a "receiver" but not as a "wireless device." Plaintiff's construction would allow a base station to be listed under its construction. The Court should presume that the use of different terms in the claims connote different meanings unless there is evidence to the contrary. *Netscape Comms. Corp. v. Valueclick, Inc.*, 684 F. Supp. 2d 678, 690 (E.D. Va. 2009) ("in the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connote different meanings"). There is no intrinsic evidence to support the notion that a base station may be a wireless device, and Plaintiff has cited to none. Defendants' construction is consistent with the prosecution history, in which the patentee characterized the claimed "wireless device" as a "mobile device," *see* Ex. O at 12–13, 16; Ex. N at 2–4, 7, and inventor testimony that confirms the claims were directed to a method where "the receiver is the base station and the transmitter is the mobile device," Ex. R at 139:19–140:11. Accordingly, the Court adopts the following construction.

Final Construction
"a mobile device configured to communicate while unattached to any physical wires"

2. "indication of transmission signal strength of said signal"

The tenth disputed term, "indication of transmission signal strength of said signal," appears in claims 1 and 13 of the '264 Patent. The parties have proposed the following constructions:

Plaintiff's Construction	Defendants' Construction
Plain and ordinary meaning (no construction necessary) *In the alternative*, "information regarding the transmission signal strength of the signal"	"information specifying the strength (e.g., in dBm) at which said signal was transmitted by the wireless device"

Plaintiff argues that "indication of" reflects that the term "indication of signal strength' is broader that just "transmission signal strength." According to Plaintiff, the patentee could have just used "signal strength" to refer to the term if that's what patentee meant, but chose not to do so. Pl. Br. at 23. Defendants contend that their construction specifies the strength at which the signal was transmitted by the wireless device, which it argues is distinct from measurement of received signal strength from the wireless device. In essence, this term refers to the transmit power, which is different from the measured signal strength at the receiver or other data.

Plaintiff's construction is more expansive than the claims or specification contemplate. Were the claim term to encompass "*any* information regarding" the transmission signal strength of the signal," as Plaintiff proposes, any information that could be used to determine or estimate or in any way relates to the transmission signal strength to fall within the claim term. This is an expansive reading of the term not contemplated by the claims and specification. Defendants' construction is based on the intrinsic evidence, which refers to "indication" as "defining [the wireless device's] transmission signal strength." Ex. G at 6:18–25 ("receiver adapted to receive an indication from the wireless device defining its transmission signal strength"). And, at the

Markman hearing, Plaintiff was unable to identify what else the term could mean other than the measurement of the strength of the signal itself. Accordingly, the Court adopts the following construction:

Final Construction
"information specifying the strength (e.g., in dBm) at which said signal was transmitted by the wireless device"

III. CONCLUSION

For the reasons set forth above, the Court issues this Memorandum Opinion and Order as the construction of the ten disputed claim terms in the Asserted Patents.

It is **SO ORDERED**.

/s/
Hon. Michael S. Nachmanoff
United States District Judge

Alexandria, Virginia
July 19, 2023