UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

INFOGATION CORP., Plaintiff, v. ZTE CORPORATION; ZTE (USA), INC., Defendants.	Case No.: 16-cv-01901-H-JLB **CLAIM CONSTRUCTION ORDER**
INFOGATION CORP., Plaintiff, v. HTC CORPORATION; HTC AMERICA, INC., Defendants.	Case No.: 16-cv-01902-H-JLB **CLAIM CONSTRUCTION ORDER**

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INFOGATION CORP., Plaintiff, v. HUAWEI TECHNOLOGIES CO., LTD.; HUAWEI DEVICE USA, INC., Defendants.	Case No.: 16-cv-01903-H-JLB **CLAIM CONSTRUCTION ORDER**

In the above three actions, Plaintiff InfoGation Corp. asserts claims of patent infringement against Defendants ZTE (USA), Inc.,[1] HTC,[2] and Huawei,[3] alleging infringement of claim 15 of U.S. Patent No. 6,292,743 ("the '743 patent"). (16-cv-1901-Doc. No. 1; 16-cv-1902-Doc. No. 2; 16-cv-1903-Doc. No. 3.) On March 10, 2017, the parties filed their joint claim construction and prehearing statement, chart, and worksheet, identifying the disputed claim terms from the '743 patent. (16-cv-1901-Doc. Nos. 42-44; 16-cv-1902-Doc. Nos. 52-54; 16-cv-1903-Doc. No. 49.) On April 7, 2017, the parties each filed an opening claim construction brief. (16-cv-1901-Doc. Nos. 58-59; 16-cv-1902-Doc. Nos. 68-69; 16-cv-1903-Doc. Nos. 64-65.) On April 21, 2017, the parties each filed a responsive claim construction brief. (16-cv-1901-Doc. Nos. 61-62; 16-cv-1902-Doc. Nos. 71-72; 16-cv-1903-Doc. Nos. 67-68.) On April 26, 2017, the parties filed an amended joint claim construction and prehearing statement, chart, and worksheet. (16-cv-1901-Doc. No. 63; 16-cv-1902-Doc. No. 73; 16-cv-1903-Doc. Nos. 69.) On May 4, 2017, the Court issued a tentative claim construction order.

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[1] Defendant ZTE Corporation was dismissed from the action on October 11, 2016. (16-cv-1901-Doc. No. 21.)

[2] Defendant "HTC" includes HTC Corporation and HTC America, Inc.

[3] Defendant "Huawei" includes Huawei Technologies Co., Ltd. and Huawei Device USA, Inc.

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The Court held a claim construction hearing on May 5, 2017. John P. Moy and Michael L. Kirby appeared for InfoGation. Harold H. Davis, Jr. appeared for ZTE. Todd E. Landis appeared for HTC. David S. Almeling and Darin Snyder appeared for Huawai. After considering the parties' briefs, the parties' arguments at the hearing, and all relevant information, the Court construes the disputed terms from the patent-in-suit.

Background

On July 27, 2016, Plaintiff InfoGation Corp. filed three separate complaints for patent infringement against Defendants ZTE, HTC, and Huawei, alleging infringement of the '743 patent. (16-cv-1901-Doc. No. 1; 16-cv-1902-Doc. No. 1; 16-cv-1903-Doc. No. 1.) Specifically, Plaintiff alleges that Defendants' smartphones, which run the Android operating system and can connect to a Google Maps navigation server through a wireless carrier's network data, infringe, either literally or through the doctrine of equivalents, claim 15 of the '743 patent. (Id.)

The '743 patent is entitled "Mobile Navigation System" and "relates generally to [a] mobile navigation system and apparatus, and more particularly to a distributed navigation system having a wireless connection to a server for calculating optimal routes using real-time data." U.S. Patent No. 6,292,743, at 1:5-8. In describing the prior art, the '743 patent explains that, at the time of the invention, "navigation systems, in which automobiles are equipped with a navigational computer that includes a display screen, an input means such as a keypad or a remote control, and a storage means such as a CD" had become quite popular. Id. at 1:10-14. The '743 patent explains that the problem with these devices is that they are "stand-alone devices that rely completely on data stored on the local storage device for geographical and other information. Thus, the capacity of the storage device becomes a limiting factor as to how much information is available to users. In addition, users must update their mapping databases frequently to stay current." Id. at 1:27-32.

In light of these problems, the ’743 patent explains that it is desirable to have an online navigation system that can provide current information to the user – including real-time information such as traffic, weather, and road conditions – without the need for the system to update its local databases whenever changes occur. ’743 Patent at 1:36-41. The ’743 patent acknowledges that there are some prior art navigation systems, such as Toyota’s MONET system, that are able to connect to online servers and provide real-time information to the user. Id. at 1:46-61. But the ’743 patent notes that there are several problems with those real-time navigation systems.

The ’743 patent explains the problems with the real-time navigation systems at the time of the invention as follows:

> In these current systems, all geographical data transmitted by the server is in a propriety [*sic*] format. That is, downloaded information used to describe geographical data, such as point-of-interest addresses and detailed map data, includes data points, indices and the like that are specific to the particular mapping database used on the client.
>
> Accordingly, the client navigation system must have a particular pre-defined mapping database installed in order to work with the server. In some cases, the mapping database used by the client and server must be identical. If there is a mismatch between the expected mapping database and the actual mapping database used on the client, the client cannot properly interpret the geographical data downloaded from the server and the system will fail to operate.
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> Accordingly, customers using these current systems must obtain the latest version of the mapping database software available. This presents a major burden for customers and manufacturers alike due to the high frequency in which these databases must be updated.
>
> In addition, the data downloaded by the client generally requires high bandwidth communication channels due the shear volume of data transmitted by these current systems. Such high bandwidth communication channels are expensive and may not be readily available in all areas. It

> would be desirable to develop a system that requires lower bandwidth communication channels than that required by these current systems.
>
> Another problem with the current systems outlined above is that the client must include sophisticated algorithms for calculating optimal routes. In addition, these route-calculating algorithms in the client must be updated in accordance with current services and options available on the server. . . .
>
> Another problem with the current systems is that the proprietary server cannot be used with navigation systems and mapping databases provided by other manufacturers.

'743 Patent at 1:62-2:37.

The '743 patent seeks to remedy these problems in the prior art systems by using a generic natural language description to specify the optimal routing information that is generated at the server and then transmitted from the server to the client. '743 Patent at 3:21-23. The specification of the '743 patent describes "a client navigation system" as follows:

> The client navigation system establishes a wireless connection to the server via cellular telephone technology or the like. Once connected, the client requests a specific route by uploading start and stop specifications to the server. The server independently calculates an optimal route for the user based on real-time and current data available to the server, as well as user preferences or the like.
>
> The routing information is formatted using a natural language specification in accordance with each specific embodiment of the present invention.

Id. at 3:27-36.

The '743 patent explains that by having the route data generated only at the server, it allows the client devices to be much less complex and not require software changes when the server provides new information. '743 Patent at 2:53-3:10. The '743 patent further explains that by using a generic natural language description to specify the optimal routing information, the optimal routing data from the server "can be interpreted

by a variety of clients with minimal software additions." Id. at 3:11-14. Further, the patent explains that the natural language routing descriptions can be highly compressed allowing the information to travel on lower bandwidth communication channels. Id. at 3:14-20.

Independent claim 15 of the '743 patent, the only claim asserted by Plaintiff in the present actions (16-cv-1901-Doc. No. 58 at 4), claims:

> A mobile navigation system comprising:
>
> a navigation computer;
>
> a wireless transceiver coupled to said navigation computer for connecting with a navigation server, said navigation server for calculating optimal routes based on real-time information, said optimal routes being formatted using a non-proprietary, natural language description;
>
> a mapping database coupled to said navigation computer for reconstructing said optimal route from said non-proprietary, natural language description; and
>
> a display screen coupled to said navigation computer for displaying said optimal route using said mapping database.

Id. at 17:9-23.

On November 1, 2016, Defendants each filed an answer and counterclaims to Plaintiff's complaint. (16-cv-1901-Doc. No. 22; 16-cv-1902-Doc. No. 21; 16-cv-1903-Doc. No. 22.) On November 22, 2016, the Court issued a scheduling order for the three actions setting forth all dates leading up to trial and scheduling a trial date of December 5, 2017 at 9:00 a.m. (16-cv-1901-Doc. No. 31; 16-cv-1902-Doc. No. 39; 16-cv-1903-Doc. No. 31.) On March 27, 2017, the Court denied Defendants' motions for judgment on the pleadings. (16-cv-1901-Doc. No. 52; 16-cv-1902-Doc. No. 63; 16-cv-1903-Doc.

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No. 59.) By the present claim construction briefs, the parties request that the Court construe four disputed claim terms from the '743 patent. (16-cv-1901-Doc. No. 58, 59.)[4]

Discussion

I. Legal Standards for Claim Construction

Claim construction is an issue of law for the court to decide. Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 838 (2015); Markman v. Westview Instr., Inc., 517 U.S. 370, 372 (1996). Although claim construction is ultimately a question of law, "subsidiary factfinding is sometimes necessary." Teva, 135 S. Ct. at 838.

"The purpose of claim construction is to 'determin[e] the meaning and scope of the patent claims asserted to be infringed.'" O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1360 (Fed. Cir. 2008). "It is a 'bedrock principle' of patent law that the 'claims of a patent define the invention to which the patentee is entitled the right to exclude.'" Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc).

Claim terms "'are generally given their ordinary and customary meaning[,]'" which "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Id. at 1312–13. "In some cases, the ordinary meaning of claim language as understood by a [PHOSITA] may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." Id. at 1314. "However, in many cases, the meaning of a claim term as understood by persons of skill in the art is not readily apparent." O2 Micro, 521 F.3d at 1360. If the meaning of the term is not readily apparent, the court must look to "those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean," including intrinsic

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[4] The parties have filed identical claim construction briefs across the three cases. (See 16-cv-1901-Doc. Nos. 58-59, 61-62; 16-cv-1902-Doc. Nos. 68-69, 71-72; 16-cv-1903-Doc. Nos. 64-65, 67-68.) Accordingly, in analyzing the parties' claim construction disputes, the Court will cite to the briefing in Case No. 16-cv-1901 in the discussion section of this order.

and extrinsic evidence. See Phillips, 415 F.3d at 1314. A court should begin with the intrinsic record, which consists of the language of the claims, the patent specification, and, if in evidence, the prosecution history of the asserted patent. Id.; see also Vederi, LLC v. Google, Inc., 744 F.3d 1376, 1382 (Fed. Cir. 2014) ("In construing claims, this court relies primarily on the claim language, the specification, and the prosecution history.").

In determining the proper construction of a claim, a court should first look to the language of the claims. See Vitronics, 90 F.3d at 1582; see also Comark Commc'ns v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998) ("The appropriate starting point . . . is always with the language of the asserted claim itself."). The context in which a disputed term is used in the asserted claims may provide substantial guidance as to the meaning of the term. See Phillips, 415 F.3d at 1314. In addition, the context in which the disputed term is used in other claims, both asserted and unasserted, may provide guidance because "the usage of a term in one claim can often illuminate the meaning of the same term in other claims." Id. Furthermore, a disputed term should be construed "consistently with its appearance in other places in the same claim or in other claims of the same patent." Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342 (Fed. Cir. 2001); accord Microprocessor Enhancement Corp. v. Texas Instruments Inc., 520 F.3d 1367, 1375 (Fed. Cir. 2008); see also Paragon Sols., LLC v. Timex Corp., 566 F.3d 1075, 1087 (Fed. Cir. 2009) ("We apply a presumption that the same terms appearing in different portions of the claims should be given the same meaning." (internal quotation marks omitted)). Moreover, "'[a] claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.'" Vederi, 744 F.3d 1383.

A court must also read claims "in view of the specification, of which they are a part." Markman, 52 F.3d at 979; see 35 U.S.C. § 112(b) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention."). "'Apart from the claim

language itself, the specification is the single best guide to the meaning of a claim term.'" Vederi, 744 F.3d at 1382. For example, "a claim construction that excludes [a] preferred embodiment [described in the specification] 'is rarely, if ever, correct and would require highly persuasive evidentiary support.'" Adams Respiratory Therapeutics, Inc. v. Perrigo Co., 616 F.3d 1283, 1290 (Fed. Cir. 2010).

But "[t]he written description part of the specification does not delimit the right to exclude. That is the function and purpose of claims." Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc). "[A] claim construction must not import limitations from the specification into the claims." Douglas Dynamics, LLC v. Buyers Products Co., 717 F.3d 1336, 1342 (Fed. Cir. 2013). Therefore, "it is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." Dealertrack, Inc. v. Huber, 674 F.3d 1315, 1327 (Fed. Cir. 2012); see also Kara Tech. Inc. v. Stamps.com Inc., 582 F.3d 1341, 1348 (Fed. Cir. 2009) ("The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.").

In most situations, analysis of the intrinsic evidence will resolve claim construction disputes. See Vitronics, 90 F.3d at 1583; Teva, 135 S. Ct. at 841. However, "[w]here the intrinsic record is ambiguous, and when necessary," district courts may "rely on extrinsic evidence, which 'consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.'" Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1360 (Fed. Cir. 2013) (quoting Phillips, 415 F.3d at 1317). A court must evaluate all extrinsic evidence in light of the intrinsic evidence. Phillips, 415 F.3d at 1319. "Extrinsic evidence may not be used 'to contradict claim meaning that is unambiguous in light of the intrinsic evidence.'"

Summit 6, LLC v. Samsung Elecs. Co., 802 F.3d 1283, 1290 (Fed. Cir. 2015); see also Bell Atl. Network Servs., Inc. v. Covad Commc'ns Grp., Inc., 262 F.3d 1258, 1269 (Fed. Cir. 2001) ("[E]xtrinsic evidence . . . may not be used to vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history."); Vederi, 744 F.3d at 1382 ("[E]xtrinsic evidence may be less reliable than the intrinsic evidence."). In cases where subsidiary facts contained in the extrinsic evidence "are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence." Teva, 135 S. Ct. at 841.

"[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims." O2 Micro, 521 F.3d at 1362. In certain situations, it is appropriate for a court to determine that a claim term needs no construction and its plain and ordinary meaning applies. See id.; Phillips, 415 F.3d at 1314. But "[a] determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute." O2 Micro, 521 F.3d at 1361. If the parties dispute the scope of a certain claim term, it is the court's duty to resolve the dispute. Id. at 1362; accord Eon Corp. IP Holdings v. Silver Spring Networks, 815 F.3d 1314, 1318 (Fed. Cir. 2016).

II. Analysis of the Claim Terms

A. "navigation server"

The parties agree that the term "navigation server" should be construed as "a server that provides navigation function." (Doc. No. 44 at 1; Doc. No. 58 at 5; Doc. No. 63-2 at 1.) Accordingly, the Court construes the term "navigation server" as "a server that provides navigation function."

B. "non-proprietary"

Plaintiff proposes that the term "non-proprietary" be given its plain and ordinary

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meaning or, in the alternative, that it be construed as "format that can be used with navigation systems provided by other manufacturers." (Doc. No. 63 at 2.) Defendants propose that the term be construed as "format that can be used with mapping databases provided by other manufacturers." (Doc. No. 59 at 4.) Because the parties dispute the scope of this claim term, the Court must resolve the parties' dispute. See O2 Micro, 521 F.3d at 1361; Eon, 815 F.3d at 1318.

The parties' dispute with respect to this claim term centers on whether the term "non-proprietary" merely means that the route is formatted so that it can be used with navigation systems provided by other manufacturers or whether it specifically requires the route is formatted so that it can be used with mapping databases provided by other manufacturers. The Court begins its analysis of this claim term by reviewing the intrinsic record. A review of the claim language does not resolve the parties' dispute as the claim language itself does not provide any guidance with respect to the parties' dispute. The claim language simply states that the route is "formatted using a non-proprietary, natural language description." '743 Patent at 17:15-16.

A review of the specification shows that it supports Defendants' proposed construction, not Plaintiff's proposed construction. In describing the prior art navigation systems, the specification explains: "In these current systems, all geographical data transmitted by the server is in a propriety [*sic*] format." Id. at 1:62-63. The specification explains that this was a problem because "the proprietary server cannot be used with navigation systems and mapping databases provided by other manufacturers." Id. at 2:34-36. Therefore, "[i]t would be desirable to have a navigation system that can be easily adapted to work with a variety of mapping software and navigational systems." Id. at 2:39-41. The specification goes on to provide: "The present invention alleviates many of the failings of the prior art. . . . The present invention can be used with any mapping database installed on the client navigation system." Id. at 2:45-50; see also id. at 3:23-26

("The natural language description is completely independent from the local mapping database software used on the clients, and can therefore be used in conjunction with any type of mapping database software."); id. at 3:6-10 ("A feature of the present invention is that the server is hardware and software independent from the client. In this fashion, navigation systems from any vendor can be easily adapted to work with the server of the present invention.").

A court should not import limitations from the specification into a claim construction absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited. See Dealertrack, 674 F.3d at 1327; Douglas Dynamics, 717 F.3d at 1342. But, here, there is a clear indication in the specification that the patentees intended the invention to require that the route description be capable of being used with mapping databases provided by other manufacturers. The Federal Circuit has explained that "'[w]here the general summary or description of the invention describes a feature of the invention . . . and criticizes other products . . . that lack that same feature, this operates as a clear disavowal . . . .'" Edwards Lifesciences LLC v. Cook Inc., 582 F.3d 1322, 1333 (Fed. Cir. 2009) (quoting Astrazeneca AB v. Mut. Pharm. Co., 384 F.3d 1333, 1340 (Fed. Cir. 2004)). Here, the specification describes as a feature of the invention that it can be used with any type of mapping database software, see '743 Patent at 2:45-50, 3:23-26, and the specification criticizes the prior art navigation systems for not being able to be used with "mapping databases provided by other manufacturers."[5] Id. at 2:34-36. Thus, this language constitutes a clear disavowal of navigation systems that do not have the capability of being used with mapping databases provided by other

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[5] The Court rejects Plaintiff's contention that the specification is merely referring to compatibility with client navigation systems made by other manufacturers. (See Doc. No. 58 at 10; Doc. No. 62 at 4.) The specification in both the Background of the Invention section and the Summary of the Invention section specifically refers to the invention being compatible with "any mapping database" produced by other manufacturers, not just client navigation systems produced by other manufacturers. See '743 Patent at 2:34-36, 2:45-50, 3:23-26.

manufacturers.

In addition, the Court notes that in the cited passages, the specification is describing the invention as a whole, not merely a preferred embodiment. See'743 Patent at 2:45-50 ("The present invention can be used with any mapping database installed on the client navigation system."). The Federal Circuit has explained: "When a patentee describes the features of the present invention as a whole, he alerts the reader that this description limits the scope of the invention." Pacing Techs., LLC v. Garmin Int'l, Inc., 778 F.3d 1021, 1025 (Fed. Cir. 2015) (internal quotation marks omitted)); accord Regents of Univ. of Minnesota v. AGA Med. Corp., 717 F.3d 929, 936 (Fed. Cir. 2013).

Further, that the term "non-proprietary" requires that the route is formatted so that it can be used with mapping databases provided by other manufacturers is also supported by a disavowal contained in the prosecution history. "Statements made during prosecution may also affect the scope of the claims." Computer Docking Station Corp. v. Dell, Inc., 519 F.3d 1366, 1374 (Fed. Cir. 2008). "Under the doctrine of prosecution disclaimer, a patentee may limit the meaning of a claim term by making a clear and unmistakable disavowal of scope during prosecution." Purdue Pharma L.P. v. Endo Pharm. Inc., 438 F.3d 1123, 1136 (Fed. Cir. 2006); see also Golden Bridge Tech., Inc. v. Apple Inc., 758 F.3d 1362, 1365 (Fed. Cir. 2014) ("Prosecution disclaimer or disavowal must be clear and unmistakable."). "A patentee could do so, for example, by clearly characterizing the invention in a way to try to overcome rejections based on prior art." Computer Docking, 519 F.3d at 1374. Furthermore, "the prosecution history may be given substantial weight in construing a term where that term was added by amendment." Bd. of Regents of the Univ. of Texas Sys. v. BENQ Am. Corp., 533 F.3d 1362, 1369 (Fed. Cir. 2008).

The prosecution history shows that when it was originally filed, claim 15 did not contain the term "non-proprietary." (Doc. No. 59-3, Davis Decl. Ex. B at 27.) The PTO

rejected the claim as anticipated by the prior art reference Delorme, U.S. Patent No. 5,948,040. (Doc. No. 59-4, Davis Decl. Ex. C at 2.) In response to the PTO's rejection, the applicants amended claim 15 to include the "non-propriety" claim limitation. (Doc. No. 59-2, Davis Decl. Ex. A at 20-21.) The applicants explained that the amendments made the claim patentable because "DeLorme does not disclose, teach, or suggest, among other things, formatting the optimal route into a non-proprietary, natural language description and downloading the non-proprietary, natural language description to the client." (Id. at 11.) In distinguishing DeLorme, the applicants explained that one problem with the DeLorme system "is that the proprietary server cannot be used with navigation systems and mapping databases provided by other manufacturers." (Id. at 12.) The applicants explained, in contrast:

> In the claimed method and navigation system, formatting the optimal route into a nonproprietary, natural language description and downloading the non-proprietary, natural language description to the client allows the navigation system to be used with any mapping database installed on the client navigation system. . . . The natural language description is completely independent from the local mapping database software used on the clients, and can therefore be used in conjunction with any type of mapping database software. DeLorme does not disclose teach or suggest the claimed method nor any of the advantages enumerated above."

(Id. at 12-13.) Here, in an effort to overcome the DeLorme prior art reference, the patentees clearly and unambiguously characterized their invention as using a route description that could be used with any type of mapping databases provided by other manufacturers. Thus, this language in the prosecution history constitutes a disavowal of claim scope and should be given substantial weight. See Computer Docking, 519 F.3d at 1374; Bd. of Regents of the Univ. of Texas Sys., 533 F.3d at 1369.

In sum, Defendants' proposed construction for the claim term "non-proprietary" is consistent with and supported by clear disavowals contained in both the specification and the prosecution history of the '743 patent. Accordingly, the Court construes the term

"non-proprietary" as "format that can be used with mapping databases provided by other manufacturers."

C. "natural language"

Plaintiff proposes that the term "natural language" be given its plain and ordinary meaning or, in the alternative, that it be construed as "text using generic terms." (Doc. No. 58 at 7.) Defendants propose that the term be construed as "a language spoken and written by humans."[6] (Doc. No. 59 at 10.) Because the parties dispute the scope of this claim term, the Court must resolve the parties' dispute. See O2 Micro, 521 F.3d at 1361; Eon, 815 F.3d at 1318.

The Court begins its analysis of this claim term by reviewing the intrinsic record. A review of the claim language does not resolve the parties' dispute as the claim language itself does not reveal the meaning of the term "natural language." The claim language simply states that the route is "formatted using a non-proprietary, natural language description." '743 Patent at 17:15-16.

A review of the '743 patent's specification shows that Defendants' proposed construction is consistent with how the term "natural language" is used in the specification. Figure 5 of the '743 patent and its accompanying text provide an example of "a natural language format that can be used to specify route[s] in accordance with an embodiment of the present invention." Id. at 4:29-31, 8:60-62. Figure 5 is depicted below:

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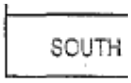
[6] As an initial matter, the Court rejects Plaintiff's contention that Defendants' proposed construction is improper because it requires that a human speak or write the route information and that the route description be grammatically correct. (Doc. No. 58 at 9; Doc. No. 62 at 2.) Defendants' proposed construction for this claim term does not contain either of these requirements. Defendants' proposed construction simply requires that route description be formatted in a language that is spoken or written by humans, (Doc. No. 59 at 10), not that the route description be spoken by a human or be grammatically correct.



Id. fig. 5. The specification goes on to explain:

> A generic designation for the natural language description is depicted in block 502. This is followed by a specific example of a formatted calculated route as shown in block 508.
>
> The natural language description 502 preferably consists of start and end route designations 504. These designations are described using a natural language specification and generally include such information as street names and city names, etc. . . .
>
> The start and end route designations are followed by a number of links 505 a, 505 b . . . 505 n (generally 505). Each link 505 is described using a natural language description. This can include m any variables such as a street name, a distance, a turning orientation, a landmark designation, a

> turning distance from the landmark, etc. . . .
>
> . . .
>
> As stated above, the natural language routing description 502 begins with the start/end route designations 504. An example of a start/end route designation is shown in block 510. These designations can be as simple as the name of the start and end streets as well as the city and state of such streets. In this example, the start/end route designation is defined as "Sea World Drive, San Diego Calif. to South Rodeo Drive, Beverly Hills Calif.["] The meaning of these terms is self-explanatory.

Id. at 8:62-9:27. In the example of a natural language route description given in figure 5 and its accompanying text, the route description is formatted in the human language of English. See, e.g., id. Thus, the example is consistent with Defendants' proposed construction, which requires that the description be in a language that is written or spoken by humans.[7]

Further, Defendants' proposed construction is also heavily supported by the extrinsic evidence in the record. Defendants have provided the Court with several technical dictionaries from around the time of the invention setting forth definitions for the term "natural language" that are consistent with Defendants' proposed construction. (See Doc. No. 59-6, Davis Decl. Ex. E, MICROSOFT COMPUTER DICTIONARY 305 (4th ed. 1999) ("natural language *n.* A language spoken or written by humans, as opposed to a programming language or a machine language."); Doc. No.59-8, Davis Decl. Ex. G, DICTIONARY OF COMPUTER WORDS 185 (Red. ed. 1995) ("natural language[.] In computer science, human language as opposed to a programming language or machine

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[7] The Court recognizes that this portion of the specification is merely describing a preferred embodiment of the invention. See '743 Patent at 8:60-62. The Court expressly notes that it is not limiting the scope of this claim term to this specific embodiment of the invention. Rather, the Court is merely noting that the description of this embodiment is consistent with Defendants' proposed construction.

language."); see also Doc. No. 59-7, Davis Decl. F; Doc. No. 59-9, Davis Decl. H.) In addition, Defendants' proposed construction for the term "natural language" is also consistent with the definition of that term contained in non-technical dictionaries. See OXFORD ENGLISH DICTIONARY (3d ed. 2003)[8] ("natural language, *n*. . . . 2. a. A language that has evolved naturally, as distinguished from an artificial language devised for international communications or for formal logical or mathematical purposes. b. *Computing*. Human language, esp. when contrasted with languages designed to be used by computers."); WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1507 (1981) ("natural language *n* : a language that is the native speech of a people (as English, Tamil, Samoan) – compare ARTIFICIAL LANGUAGE").

The Court recognizes that the Federal Circuit has cautioned that extrinsic evidence, such as dictionaries, "may be less reliable than the intrinsic evidence." Vederi, 744 F.3d at 1382. Nevertheless, the Federal Circuit has also explained that "[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. In such circumstances, general purpose dictionaries may be helpful."[9] Phillips, 415 F.3d at 1314 (citation omitted); see Ruckus Wireless, Inc. v. Innovative Wireless Sols., LLC, 824 F.3d 999, 1002 (Fed. Cir. 2016); see, e.g., Starhome GmbH v. AT & T Mobility LLC, 743 F.3d 849, 856 (Fed. Cir. 2014) (explaining "that dictionaries and treatises can often be useful in claim construction" and relying on a technical dictionary to determine that "[t]he term 'gateway' had a well-understood meaning in the art at the

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[8] Available at http://www.oed.com/view/Entry/255272?redirectedFrom=natural+language#eid (last visited May 2, 2017).

[9] Indeed, in its briefing, Plaintiff relies on a dictionary definition to establish the plain meaning of a claim term within the '743 patent. (See, e.g., Doc. No. 58 at 11.)

time" of the invention). As a result, the term "natural language" has a well-understood common meaning in both the technical and non-technical world and that meaning is consistent with how that term is used in the '743 patent's specification and is consistent with Defendants' proposed construction.[10]

Moreover, Plaintiff's proposed construction is not consistent with either the intrinsic record or the extrinsic record. The specification in both the Abstract and the Summary of the Invention describes the invention as using a "generic natural language description." '743 Patent at Abstract ("A generic natural language description is used to specify the optimal route downloaded to the client."); id. at 3:21-24 ("A generic natural language description is used to specify optimal routing information that is transmitted from the server to the client."). If the term "natural language" by itself simply meant generic text, then there would be no need for the specification to use the word "generic" to modify the term "natural language" in its description of the invention. Further, the Court does not find persuasive Plaintiff's reliance on the following passage from the specification:

> The routing information is formatted using a natural language specification in accordance with each specific embodiment of the present invention. Generally this specification includes a plain text description for each link in the route using pre-defined generic terms such as road names and turning directions.

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[10] Indeed, this is the primary problem with Plaintiff's position with respect to this claim term. Plaintiff insists that this term should be simply be given its plain and ordinary meaning. (Doc. No. 58 at 7; Doc. No. 62 at 3.) But it is Defendants' proposed construction, not Plaintiff's construction, that utilizes the well-understood plain and ordinary meaning of this claim term.

Further, the Court rejects Plaintiff's contention that Defendants' proposed construction is improper in light of the specification explaining that the data transmitted from the server to the interface module can be in HTML format. (Doc. No. 62 at 3 (citing '743 Patent at 7:36-43).) Plaintiff fails to adequately explain how the fact that the data sent from the server to the module can be in HTML format is inconsistent with the Defendants' position that the route description itself must be formatted using a description in a human language.

(Doc. No. 58 at 8 (citing '743 Patent at 3:34-39).) The Court agrees with Defendants that in this passage the terms "text" and "generic" are simply two exemplary features of the term "natural language" specification, not terms that define the phrase "natural language."[11] Accordingly, the Court construes the term "natural language" as "a language spoken or written by humans, as opposed to programming language or machine language."[12]

D. "mapping database coupled to said navigation computer for reconstructing said optimal route from said non-proprietary, natural language description"

Plaintiff proposes that the term "mapping database coupled to said navigation computer for reconstructing said optimal route from said non-proprietary, natural language description" be given its plain and ordinary meaning or, in the alternative, that it be construed as "mapping database coupled to said navigation computer used in rebuilding the optimal route from the non-proprietary, natural language description." (Doc. No. 63 at 2.) Defendants propose that this term be construed as "mapping database coupled to said navigation computer used in rebuilding the non-proprietary, natural language description into an optimal route to be displayed as part of a map." (Id.) Because the parties dispute the scope of this claim term, the Court must resolve the parties' dispute. See O2 Micro, 521 F.3d at 1361; Eon, 815 F.3d at 1318.

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[11] Further, even assuming Plaintiff is correct and the specification in this passage is defining the term "natural language," then the proper construction for the term "natural language" would be "a plain text description for each link in the route using pre-defined generic terms such as road names and turning directions," not the construction proposed by Plaintiff. '743 Patent at 3:37-39. (See also Doc. No. 62 at 3-4.)

[12] The Court slightly modifies Defendants' proposed construction to better comport with the well-understood common meaning of this term as shown in the extrinsic record and to better resolve the parties' dispute with respect to this claim term. In addition, the Court notes that Plaintiff in its briefing concedes that there is "a distinction between a natural language and a computer or programming language." (Doc. No. 62 at 3.)

The parties' dispute with respect to this claim term centers on whether this claim term specifically requires that the optimal route is displayed in a graphical format as part of a map, rather than potentially being displayed as simply text.[13] The Court begins its analysis of this claim term with a review of the claim language. The Court notes that nothing in the language in claim 15 of the '743 patent requires that the route be specifically displayed as part of a map. See '743 Patent at 17:9-23. The claim language simply requires that the system have "a display screen . . . for displaying said optimal route." Id. at 17:21-22. It does not specify how the route must be displayed on the screen. Accordingly, the claim language does not support Defendants' proposed construction.[14]

Turning to the specification, Defendants first rely on the following passage from the specification to support their proposed construction: "Once the route is reconstructed, it is displayed on the display screen on the client navigation system, using whatever mapping database is present on the client." Id. at 3:46-48. (See Doc. No. 59 at 17.) Here, the specification may be referring to the invention as a whole, but in this passage, the specification does not specify how the route must be displayed on the screen. Rather, this passage, like the language in claim 15, simply requires that the route be displayed on a screen. It does not require that the route be displayed as part of a map. Accordingly, this portion of the specification does not support Defendants' proposed construction.

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[13] By amending their proposed constructions for this claim term, the parties both agree that the word "reconstructing" within this claim term means "rebuilding." (Doc. No. 63 at 2; see also Doc. No. 62 at 5.)

[14] The Court does not find persuasive Defendants' reliance on the language in dependent claims 17 and 18. (Doc. No. 59 at 19.) Even assuming Defendants are correct and those two claims expressly require that the route be displayed graphically on a map, this is of no consequence because both of these claim are dependent to claim 15. "An independent claim impliedly embraces more subject matter than its narrower dependent claim." Intamin Ltd. v. Magnetar Techs., Corp., 483 F.3d 1328, 1335 (Fed. Cir. 2007). Thus, the fact that the narrower dependent claims 17 and 18 might contain certain limitations says nothing about whether the broader independent claim 15 contains those limitations.

In support of their proposed construction, Defendants rely on further language in the specification contained in the Detailed Description of the Preferred Embodiments section. (Doc. No. 59 at 17-19 (citing '743 Patent at 6:4-6, 6:40-41, 7:17-19, 7:53-59, 10:9-31, 11:6-11, 15:1-20, figs. 2, 3, 6, 10a, 10b).) But all of these citations are to descriptions of preferred embodiments. See, e.g., '743 Patent at 4:32-34 ("FIG. 6 is a flowchart depicting a process that can be used to implement the map reconstruction feature in accordance with an embodiment of the present invention[.]"), at 4:49-51 ("FIGS. 10A and 10B depict a navigational mapping system display in accordance with an embodiment of the present invention[.]"), 4:60-61 ("DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS"). "[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." Dealertrack, 674 F.3d at 1327. Here, there is no such clear indication that the patentees intended the claims to be limited in the manner proposed by Defendants. To the contrary, the specification consistently refers to these descriptions and figures as preferred embodiments or examples and uses permissive language in describing them. See '743 Patent at 4:32-34, 4:49-51, 4:60-61, 6:4-6, 9:48-50, 10:29-30. Further, the specification expressly provides: "While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not limitation." Id. at 15:47-49. Accordingly, the Court declines to include the limitation that the route be displayed as part of a map in the Court's construction for this claim term.[15]

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[15] The Court rejects Defendants' contention that this claim term should be limited to the descriptions of the preferred embodiments contained in the specification because every embodiment similarly discloses a particular feature. (Doc. No. 59 at 19.) Even assuming Defendants are correct and every embodiment in the specification contained that particular feature, the Federal Circuit has explained that courts should not import limitations from preferred embodiments into the claims, even if it is the only embodiment, absent a clear disavowal of claim scope. Dealertrack, 674 F.3d at 1327; see

Accordingly, the Court construes the term "mapping database coupled to said navigation computer for reconstructing said optimal route from said non-proprietary, natural language description" as "mapping database coupled to said navigation computer used in rebuilding the optimal route from the non-proprietary, natural language description."

E. "optimal routes/optimal route"

Plaintiff proposes that the term "optimal routes/optimal route" be given its plain and ordinary meaning or, in the alternative, that it be construed as "recommended route(s) based on one or more criteria." (Doc. No. 58 at 14.) Defendants argue that this claim term is indefinite. (Doc. No. 59 at 20.)

Section 112 of the Patent Act requires that a patent's specification "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as [the] invention." 35 U.S.C. § 112, ¶ 2. In Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2124 (2014), the Supreme Court "h[e]ld that 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." See also id. at 2129 ("[W]e read § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification and prosecution

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also Thorner v. Sony Computer Entm't Am. LLC, 669 F.3d 1362, 1366 (Fed. Cir. 2012) ("It is . . . not enough that the only embodiments, or all of the embodiments, contain a particular limitation."). As explained above, there is no clear disavowal here.

Further, the Court does not find persuasive Defendants' reliance on Ruckus Wireless, Inc. v. Innovative Wireless Sols., LLC, 824 F.3d 999 (Fed. Cir. 2016). In Ruckus, the Federal Circuit did list as a reason for limiting the relevant claim term to wired communications, the fact that every embodiment in the specification utilized a telephone wire. See id. at 1003. But this was only one of four reasons that the Federal Circuit gave for including that limitation in the claim term at issue. See id. at 1003-04. Defendants have not shown that the other reasons given by the Federal Circuit in Ruckus for including that limitation also apply here, in particular that the limitation was consistent with the patent's title and its description of the invention – not just the preferred embodiment – contained in the specification.

history, inform those skilled in the art about the scope of the invention with reasonable certainty."). Definiteness is measured from the viewpoint of a PHOSITA at the time the patent was filed. Id. at 2128.

Indefiniteness is a question of law involving underlying factual determinations. Teva Pharm. USA, Inc. v. Sandoz, Inc., 789 F.3d 1335, 1341 (Fed. Cir. 2015); Green Edge Enters., LLC v. Rubber Mulch Etc., LLC, 620 F.3d 1287, 1299 (Fed. Cir. 2010). The party challenging the validity of the patent-in-suit bears the burden of proving indefiniteness by clear and convincing evidence. See Nautilus, 134 S. Ct. at 2130 n.10 (citing Microsoft Corp. v. i4i Ltd. Partnership, 131 S. Ct. 2238, 2242 (2011)); see, e.g., Teva, 789 F.3d at 1345.

Defendants argue that this claim term renders claim 15 of the '743 patent indefinite because the intrinsic record fails to inform one of ordinary skill in the art, with reasonable certainty, about the scope of the term "optimal routes." (Doc. No. 59 at 21.) Specifically, Defendants argue that the intrinsic record fails to give one of ordinary skill objective boundaries as to which criteria, among an unlimited number of criteria, determines whether a route is "optimal." (Doc. No. 61 at 8-9.)

The term "optimal" in claim 15 is a term of degree. The Federal Circuit has explained that "[b]ecause language is limited, we have rejected the proposition that claims involving terms of degree are inherently indefinite." Sonix Tech. Co. v. Publications Int'l, Ltd., 844 F.3d 1370, 1377 (Fed. Cir. 2017). "Thus, 'a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.'" Id. "Claim language employing terms of degree 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). In determining whether the patent has provided sufficient guidance for a term of degree, a reviewing court should "look to the written description for guidance." Id. at 1371;

see, e.g., Sonix, 844 F.3d at 1378 ("We turn next to the written description, to determine whether there is some standard in the written description for measuring visual negligibility.").

Here, the written description provides ample guidance as to what the term "optimal routes" means. The specification provides:

> In step 408, the server connects with other databases, as necessary to obtain real-time information that is to be used in calculating an optimal route for the user. For example, the server may connect with another server on the Internet 118 that provides current traffic or road conditions relevant to the proposed route. . . .
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> In step 408, the server 114 optionally reads or requests user preference data for calculating the route. For example, the user may want to avoid toll roads, dirt roads or major highways. The server 114 can request this information from the user in real-time.

'743 Patent at 7:66-8:31; see also id. at 1:39-41 ("[I]t would be desirable to include real-time information such as traffic, weather and road conditions and the like for determining optimal routes."). Here, the specification explains that the "optimal route" is the route that is calculated by the server based on certain objective criteria such as travelling conditions or user preferences that have been provided to the server. This description in the specification "provides an objective baseline through which to interpret the claims. Thus, although the term ["optimal route"] may be a term of degree, it is not 'purely subjective,'" like other claims that the Federal Circuit has previously found to be indefinite. Sonix, 844 F.3d at 1378 (citation omitted). Further, these specific examples set forth in the specification provide sufficient guidance to one of ordinary skill in the art to determine whether a particular route is optimal. Thus, the written description of the '743 patent

"supports the conclusion that a skilled artisan would have understood the term [optimal route] with reasonable certainty." Id. at 1379 (finding a term of degree definite where the specification provided sufficient examples to allow an accused infringer to understand the claim's scope). Accordingly, Defendants have failed to establish that claim 15 is indefinite based on the claim's use of the word "optimal."[16]

Defendants also argue that the specific term "said optimal route" renders Claim 15 indefinite because the term lacks an antecedent basis. (Doc. No. 59 at 23-24.) Defendants' contention is based on the fact that Claim 15 provides that the claimed system includes a "navigation server for calculating optimal routes based on real-time information, said optimal routes being formatted using a non-proprietary, natural language description," but Claim 15 later provides that the system also includes "a mapping database coupled to said navigation computer for reconstructing said optimal route from said non-proprietary, natural language description; and a display screen coupled to said navigation computer for displaying said optimal route using said mapping database." '743 Patent at 17:13-23.

The Federal Circuit has explained that "a claim could be indefinite if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable." Halliburton Energy Servs., Inc. v. M-I LLC, 514 F.3d 1244, 1249 (Fed. Cir. 2008). But, here, the antecedent basis for the term "optimal route" can be ascertained with reasonable certainty based on a review of the claim language and the specification. A review of the language in claim 15 shows that the term "said

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[16] The Court does not find persuasive Defendants' citations to cases where a district court determined that the claim term "optimal" or "optimized" was indefinite. (See Doc. No. 59 at 21-22.) The Supreme Court and Federal Circuit have both explained that indefiniteness is to be evaluated in light of the intrinsic record of the patent-in-suit. See Nautilus, 134 S. Ct. at 2124, 2129; Interval Licensing, 766 F.3d at 1370. That the intrinsic record for the patents in those cases might not have provided sufficient guidance to one skilled in the art as to the term "optimal" or "optimized" has no bearing on whether the intrinsic record for the '743 patent at issue in this case provides sufficient guidance for the term "optimal route." Cf. Carrier Corp. v. Goodman Glob., Inc., 64 F. Supp. 3d 602, 614 (D. Del. 2014) (rejecting indefiniteness challenge to the term "optimal control strategy").

optimal route" refers to one of the "optimal routes" that the server is capable of calculating. That claim 15 first uses the term "optimal routes" does not render the claim indefinite because in that passage the claim is merely setting forth the server's capabilities. See '743 Patent at 1:8; see also id. at 17:13-14. Claim 15 then refers to the term "optimal route" in the singular to provide that it is an optimal route that is reconstructed by the mapping database and then displayed on the screen. See id. at 18-23; see also id. at 3:29-33, 7:66-8:1, 8:37-40. Accordingly, Defendants have failed to establish that claim 15 is indefinite because the term "said optimal route" lacks an antecedent basis.[17] In sum, Defendants have failed to meet their burden of proving by clear and convincing evidence that claim 15 is indefinite.

Plaintiff's proposed construction for the term "optimal routes/optimal route" is consistent with the intrinsic record of the '743 patent, in particular how the term is used in the specification. See '743 Patent at 7:66-8:31, 1:39-41. Accordingly, the Court construes the term "optimal routes/optimal route" as "recommended route(s) based on one or more criteria."

Conclusion

For the reasons above, the Court adopts the constructions set forth above.

IT IS SO ORDERED.

DATED: May 5, 2017

MARILYN L. HUFF, District Judge
UNITED STATES DISTRICT COURT

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[17] The Court does not find persuasive Defendants' reliance on Imperium (IP) Holdings, Inc. v. Apple, Inc., 920 F. Supp. 2d 747 (E.D. Tex. 2013). (Doc. No. 59 at 23-24; Doc. No. 61 at 9-10.) That case dealt with a different situation where the relevant claim term was first stated in the singular and then later stated in the plural. See Imperium, 920 F. Supp. 2d at 757-59. In light of that ambiguity, the district court found that the scope of the relevant claims was not discernible. Id. In contrast, here, the term is first stated in the plural and then in the singular, and the term's antecedent basis and scope is ascertainable with reasonably certainty from a review of the claim language and the specification.