

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

SKYHOOK WIRELESS, INC.,

Plaintiff,

v.

GOOGLE INC.,

Defendant.

CIVIL ACTION
NO. 10-cv-11571-RWZ

**GOOGLE INC.'S REPLY IN SUPPORT OF
MOTION FOR SUMMARY JUDGMENT OF INDEFINITENESS**

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I. INTRODUCTION

Skyhook's patents describe at length how the inventors identified a problem they called "arterial bias" in prior art data collection methods, and how they believed this problem led to a less accurate Wi-Fi based location system. The patents-in-suit also describe the inventors' solution to the "arterial bias" problem: planning a systematic route through the target area according to the Chinese Postman algorithm, and following this route while scanning for Wi-Fi access points. This, according to the specification, allowed them to create "reference symmetry," and "avoid arterial bias." As Google has shown, however, the claim language is flawed and irreconcilable with these teachings. In response, Skyhook would have the Court simply delete the "avoid[s] arterial bias" and provide "reference symmetry" limitations from the '988 and '694 patents. Skyhook Opp. at 18-19 n.10 (arguing that these limitations "do not create any additional limitations in the claims and bear no weight in an infringement analysis"). But to "avoid arterial bias" and provide "reference symmetry" *was the point of the invention*. In effort to rescue the '988 and '694 patents from indefiniteness, Skyhook would cut the heart out of them.

Skyhook's argument that arterial bias and reference symmetry are superfluous in light of the "recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point" requirement, and its newfound assertion that the same requirement is a product-by-process limitation, *see* Skyhook Opp. at 12, are clear admissions that the patents are fundamentally about the particular methodology used for driving the target area while collecting information about Wi-Fi access points. This supports Google's readings of the "target area," "arterial bias," and Location Terms. Skyhook cannot avoid the intrinsic evidence.

As to several other terms, Skyhook's approach is to argue that the patents do not have to be clear because the person of ordinary skill in the art would *just know* what to do, and *just know* where to draw the line around what is or is not claimed. As Google shows below, this is implausible, and in fact the claims are indefinite.

II. INDEFINITENESS IS AN ISSUE OF LAW TO BE RESOLVED BY THE COURT

There are no genuine issues of material fact that preclude this Court from ruling on Google's Motion for Summary Judgment of Indefiniteness. Definiteness is an issue of law that can and should be resolved by the Court. *Personalized Media Commc'ns, LLC v. Int'l. Trade Comm'n*, 161 F.3d 696, 705 (Fed. Cir. 1998). "[T]he same principles that generally govern claim construction are applicable to determining whether allegedly indefinite claim language is subject to construction." *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008).

Skyhook argues that the differing views of Dr. Anthony S. Acampora and Skyhook's own expert, Dr. David Kotz, as to whether and how a person of ordinary skill would understand the claims raises a genuine issue of material fact that precludes summary judgment of indefiniteness. Opp. Br. at 2. Not so. "When legal experts offer their conflicting views of how the patent should be construed, or where the legal expert's view of how the patent should be construed conflicts with the patent document itself, such conflict does not create a question of fact[.]" *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983 (Fed. Cir. 1995). In *Exxon Research*, for example, the Federal Circuit held that conflicting expert opinions as to the understanding of a person of ordinary skill in the art did not create a genuine issue of material fact. *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1376 (Fed. Cir. 2001); *see also Fujitsu Ltd. v. Tellabs Operations*, — F. Supp. 2d —, 2011 WL 1261111, at *10 (N.D. Ill. Mar. 31, 2011) ("factual questions purportedly raised by extrinsic evidence presented to the court do not preclude summary judgment of indefiniteness"); *Am. Med. Sys., Inc. v. Biolitec, Inc.*, 666 F. Supp. 2d 216, 223 (D. Mass. 2009) ("[C]ourts commonly rule on any asserted claim indefiniteness when they construe patent claims.") (citation omitted); 3 Donald S. Chisum, *Chisum on Patents*, § 8.03[7] (2011) ("Federal Circuit decisions after *Exxon Research* recited that definiteness as a ground for invalidating a patent claim is a legal conclusion. This makes a definiteness challenge amenable to resolution on summary judgment."). Although a court may submit the underlying facts to a jury for an advisory verdict, that does not change Federal Circuit precedent holding that indefiniteness is an issue of law. *See Lucent Techs. v. Newbridge*

Networks Corp., 168 F. Supp. 2d 181, 244 (D. Del. 2001) (reviewing jury’s verdict on indefiniteness *de novo* when considering defendant’s motion for judgment as a matter of law).

In any case, Dr. Kotz’s testimony contradicted his declaration in numerous respects. Even to the extent he and Dr. Acampora disagree—and as shown below they agree on a great deal—their differing views do not preclude the Court from ruling on indefiniteness as a matter of law.¹

III. THE PATENTS-IN-SUIT ARE INDEFINITE, AND THEREFORE INVALID

A. The ‘988 and ‘694 Patents are Indefinite and Invalid Because They Claim Both a Database and a Method of Updating It.

In its Opposition, Skyhook argues for the first time that the ‘988 and ‘694 patents are product-by-process claims in which the claimed product is defined by the method of making it. Skyhook Opp. at 12-13. This argument is in stark contrast to Skyhook’s previous claim that the “recording multiple readings...” limitation was merely “a description of the position information,” Skyhook Br. at 21, and its efforts to de-emphasize the data collection methodology, *see, e.g., id.* at 6. In light of Skyhook’s assertion that the ‘988 and ‘694 patents recite product-by-process limitations, its arguments that Google is reading in limitations from the specification simply fall away. Even under Skyhook’s own reading of the patents, the methodology of traversing the target area to record access point information is a defining aspect of the claimed invention.

¹ In addition to the flaws discussed below, Dr. Kotz’s testimony should be given little, if any, weight because it is part of an obvious scramble by Skyhook to put its pre-existing legal arguments into the mouth of an expert and thereby create a “fact” issue. Dr. Kotz had no role whatsoever in formulating Skyhook’s claim constructions, including those on which he opines, as he was not retained until well after Skyhook filed its opening claim construction brief. Declaration of Catherine R. Murphy in Support of Google Inc.’s Reply In Support of Motion For Summary Judgment Of Indefiniteness (“Second Murphy Decl.”), Ex. A at 40:9-11. He spent no more than twenty, and perhaps as few as ten, hours total reviewing the four patents-in-suit, reviewing Google’s and Skyhook’s opening claim construction papers, reviewing Dr. Acampora’s declaration, discussing the case with counsel (he never spoke to the inventors or anyone other than counsel), and editing his declaration. *Id.* at 33:1-34:18, 43:17-25. Dr. Kotz has never separately reviewed the prosecution histories of the patents-in-suit, nor has he seen any of the evidence submitted as exhibits in support of Google’s or Skyhook’s opening papers. *Id.* at 31:17-32:17, 44:8-45:20 Dr. Kotz’s only personal experience with Wi-Fi location is his supervision of a single paper, on which a post-doctoral student and an undergraduate student are the primary authors. *Id.* at 51:17-52:4, 56:13-57:7.

Skyhook's own expert recognizes this. Dr. Kotz testified, "I think the invention describes a planned, structured method of collecting the information, such as driving all the streets and in an effort to observe as many access points as possible from as many sides as possible." Second Murphy Declaration, Ex. B at 6:24-7:3; *see also id.* at 7:18:18:2, 23:22-24:3 ("Q. [W]hen you say perform the invention, what exactly do you mean by that? A. I would mean collecting the scanning data using some kind of a planned route that covers all of the streets or substantially all the streets so that you can obtain a better sample of the access point and locations.").

Should the Court determine that the '988 and '694 patents in fact recite product-by-process claims, this will have several consequences for claim construction, infringement, and invalidity.² A product-by-process claim is a claim for a product, albeit one defined by the process of making it. *Amgen Inc. v. Hoffman-LA Roche Ltd.*, 580 F.3d 1340, 1370 (Fed. Cir. 2009) ("[A] product-by-process claim is not infringed by a product made by a process other than the one recited in the claim."). Such a claim is limited to the claimed process; in other words, to show infringement a patentee must prove both that the product is the same as the one claimed, *and* that it was produced using the process set out in the claims. *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1293 (Fed. Cir. 2009) ("process terms in product-by-process claims serve as limitations in determining infringement") (quotation and citation omitted).

Here, claim 1 in each of the '988 and '694 patents recite, and Skyhook emphasizes, that the "*calculated position information is obtained* from recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point." But the common specification

² As to invalidity under 35 U.S.C. §§ 102 and 103, product-by-process claims are valid only to the extent the resulting product is novel and non-obvious. *See* 3 Donald S. Chisum, *Chisum On Patents*, § 8.05[3] (2011) ("Even though a product may be claimed in terms of the process of making it, the product still must be new in structural terms in order to meet the novelty requirement.") (citing cases). It is not enough to sustain a claim that the process of making it be novel. *See, e.g., Amgen*, 580 F.3d at 1369-70 ("In determining validity of a product-by-process claim, the focus is on the product and not on the process of making it. That is because of the ... long-standing rule that an old product is not patentable even if it is made by a new process. As a result, a product-by-process claim can be anticipated by a prior art product that does not adhere to the claim's process limitation.").

is clear that it is raw scan data—not the “calculated position information” derived from it—that “is obtained from recording multiple readings.” Declaration of Susan Baker Manning (“Manning Decl.”) (Dkt. 45), Ex. C at 10:8-36, 12:29-13:30. The ‘988 and ‘694 patent claims at most describe part of the process of obtaining the underlying raw scan data; nothing in the claims describes the complete process of actually creating the “calculated position information” from that raw data. If the Court determines that the ‘988 and ‘694 patents are product-by-process claims, the inventors’ clear failure to set out any complete process by which the “calculated position information” could be “obtained” is another, separately sufficient reason to find the claims indefinite and invalid. *Application of Moore*, 439 F.2d 1232, 1234 (C.C.P.A. 1971) (“We view the claims before us as drawn too incomplete and therefore indefinite product-by-process claims.... It is our view that the omission from the claims of process parameters, requisite to yield the desired [product], renders the claims indefinite.”) (quoting underlying PTO Board of Appeals decision, which it reversed on other grounds).

That aside, if the Court determines that claim 1 in each of the ‘988 and ‘694 patents is a product-by-process claim, that does *not* resolve the question of whether the claims as a whole violate the prohibition on mixed apparatus and method limitations. A product-by-process claim, like any other, is subject to the prohibition on mixing apparatus and method limitations. *Manual of Patent Examination Procedure* § 2173.05(p)(I) (“A claim to a device, apparatus, manufacture, or composition of matter may contain a reference to the process in which it is intended to be used without being objectionable under 35 U.S.C. 112, second paragraph, *so long as it is clear that the claim is directed to the product and not the process.*”) (emphasis added). Here, the methodology in the claims is not just employed in the process of initially creating the database; rather, the methodology must be employed over time to update the database.

Both the ‘988 and ‘694 patents require an ongoing correspondence between the database and the target area such that the database has calculated locations for “substantially all Wi-Fi access points in the target area.” Skyhook is wrong when it contends that whether the database includes “substantially all Wi-Fi access points in the target area” need only be assessed “at the

time the database was created.” Skyhook Opp. Br. at 25. Skyhook tellingly cites no law or evidence, and its position is belied by the patents themselves. The patents recognize that the number of Wi-Fi access points in the target area changes over time, and that the correspondence between the database and the target area is to be maintained over time. Manning Decl., Ex. C at 3:3-6 (identifying old data as a problem in prior art databases, and stating, “The age of the access point location is important since over time access points can be moved or taken offline.”), 5:37-41 (database updated using “newly-discovered position information”), 12:21-28 (newer data given greater weight than older data), 12:29-38 (describing updating of database), 13:26-30 (calculated location information to be stored along with a timestamp “to indicate freshness”). The claim language is consistent with these teachings as it creates a present tense association between “substantially all Wi-Fi access points” and the “target area,” indicating on-going correspondence whenever infringement is to be measured. Also consistent is the ‘988 patent’s requirement of “logic to add records to the database for newly-discovered Wi-Fi access points” as well as logic to recalculate the positions of previously detected Wi-Fi access points based on new scan data. *Id.* at claim 1. Because the ‘988 and ‘694 patents require the use of the claimed method to update the database over time, they are invalid under § 112, ¶ 2. *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005); *Rembrandt Data Techs., LP v. AOL, LLC*, 641 F.3d 1331, 1339 (Fed. Cir. 2011); *see also* Google Br. at 10-12; Google Opp. at 4-6.

B. “Reference symmetry” and “avoid[s] arterial bias” cannot be read out of the claims.

Skyhook argues for the first time in a footnote that the “reference symmetry” and “avoid[s] arterial bias” limitations do no work. Skyhook Opp. at 18-19 n.10. So long as the other limitations of the claim are met, the argument goes, “you will necessarily ‘avoid arterial bias’ and create ‘reference symmetry’” and the limitations can simply be read out of the claims. *Id.* Although Skyhook is wrong, the argument is yet another admission that the routing method used to collect scan data is central to the claimed invention. *See* Google Br. at 23-30 (discussing “target area,” “arterial bias,” and the Location Terms).

The “avoid[s] arterial bias” and “reference symmetry” requirements are limiting for two reasons. First, they are separate requirements, central to the invention as presented to the PTO. Having obtained the patent on the strength of these requirements, Skyhook cannot now excise them from the patents. Skyhook analogies the “so that” language to a “whereby” clause, which courts regard as non-limiting if it merely “states the result of the patented process. However, when the ‘whereby’ clause states a condition that is material to patentability, it cannot be ignored in order to change the substance of the invention.” *Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329 (Fed. Cir. 2005). The *Hoffer* court held that a “whereby” clause was limiting because it set forth an “element [that] is described in the specification and prosecution history as an integral part of the invention.” *Id.* at 1330. In contrast, “[a] ‘whereby’ clause that merely states the result of the limitations in the claim adds nothing *to the patentability* or substance of the claim.” *Texas Instruments v. U.S. Intern. Trade Com’n*, 988 F. 2d 1165, 1172 (Fed. Cir. 2003).

Here, the avoidance of arterial bias and provision of reference symmetry were fundamental to what the inventors were trying to achieve. *See, e.g.*, Manning Decl., Ex. C. at Abstract, 7:52-8:59, 9:48-10:4, Figs. 3-6, 11. The prosecution histories of the ‘988 and ‘694 patents confirm the importance of these limitations to the claimed inventions. Both applications were originally rejected as unpatentable, and both issued only after the applicants amended the limitations that set out the required methodology for traversing the target area, and specified the avoidance of arterial bias and reference symmetry requirements. *Id.*, Ex. G at GSHFED183 *id.*, Ex. H at GSHFED297; *see also generally* Google Br. at 7-8, 28-30 (discussing prosecution history).³ In amending the ‘988 patent claims, the applicants argued that their invention was patentable because: “[B]y performing a planned audit, and avoiding arterial bias, applicants at least achieve more complete information about access points in the target area, higher quality

³ Dr. Kotz opined that the scope of the amended claims as issued is the same as the claims as unamended claims as filed—at least under Skyhook’s constructions. Second Murphy Decl., Ex. A at 138:13-144:3. This casts doubt not only on Skyhook’s claim constructions, but more broadly on the validity of the patents-in-suit under 35 U.S.C. §§ 102 and 103.

estimates of access point locations, and reference symmetry.” GSHFED189; *see also* GSHFED187-89. Having obtained the ‘988 and ‘694 patents by arguing that collecting data in a specific way that avoided arterial bias and provided reference symmetry made the claims patentable, Skyhook cannot now jettison those very limitations. *Hoffer*, 405 F.3d at 1329.

Second, a database in which the calculated location information was derived from scan data “obtained from recording multiple readings of the Wi-Fi access point[s] at different locations around the Wi-Fi access point[s]” can suffer from arterial bias and fail to provide reference symmetry—even as Skyhook would read the relevant terms. Acampora Decl. ¶¶ 73-77 and 81-83; Second Murphy Decl., Ex. A at 124:16-128:25, 152:4-156:9. As Google has previously shown, under Skyhook’s erroneous interpretation of the claims the calculated locations could be based on *any* data “obtained from recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point.” Google Opp. at 18-21. This would include data obtained from the Random Method—the very method that the inventors criticized as flawed because it resulted in arterial bias and lacked reference symmetry.

Dr. Kotz notably disagrees with Skyhook on the importance of the “avoid[s] arterial bias” and “reference symmetry” limitations; he testified that the limitations are, in fact, critical to the analysis. *See, e.g.*, Second Murphy Decl., Ex. B at 7:18-18:2 (“Q. [C]an you practice the claimed invention of the 988 patent, Claim 1, without planning a route? [objection] A. I’m finding it difficult to think of any way you could accomplish this without planning the route because, otherwise, you wouldn’t be able to say things like so that the multiple readings have reference symmetry and so that the calculated position avoids arterial bias.”).⁴ Dr. Kotz in particular testified that he was unable to draw a line between what would constitute “recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point” and what

⁴ In addition to showing that the “arterial bias” and “reference symmetry” limitations are critical to any analysis, this testimony weighs in favor of Google’s proposed constructions of the Location Terms, and its alternative proposals for the “recording” terms, all of which include concrete criteria by which the “recording multiple readings ...” limitation might be judged.

would not. *Id.*, Ex. A at 121:22-124:15, 125:20-128:14, and 126:3-4 (“aroundness, if you will, is maybe a matter of degree”). If even Skyhook’s expert cannot determine what is “recording multiple readings of the Wi-Fi access point at different locations around the Wi-Fi access point” as claimed, it cannot be that of reference symmetry and the avoidance of arterial bias are the necessary result of that unknown and unknowable method. The limitations are not superfluous.

C. The “Reference Symmetry” Limitations are Unintelligible. (‘988 patent, claim 1 and ‘694 patent, claim 1)

Skyhook essentially concedes that the claims do not apprise one of skill in the art of the difference between a situation with reference symmetry and a non-infringing one. Rather, Skyhook’s argument is that the ‘988 and ‘694 patents need not do so because the reference symmetry limitation is as clear as it can be. Skyhook Opp. at 15-18. Skyhook’s argument is contrary to Federal Circuit precedent, and unsupported by the patents.

The Federal Circuit has stated, “if the claims, read in light of the specification, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more[.]” *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385 (Fed. Cir. 1986) (citation and quotation omitted). Skyhook ignores the notice requirement. Skyhook Opp. at 15 (quoting *Hybritech* in part). Nothing in *Hybritech*, or any other case⁵, justifies Skyhook’s abandonment of the definiteness requirement. Claims must always give notice of the scope of the patent monopoly. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005).

In any case, it is not correct that the claims are as clear as possible. The patents-in-suit include teachings about reference symmetry; the claims are indefinite because those teachings cannot be reconciled with what the claims say. Skyhook’s claim that “reference symmetry” in the claims refers to the distribution of Wi-Fi access points around the user device, is

⁵ See *Miles Labs., Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993) (reciting rule, but no analysis of the level of precision required in light of the subject matter); *Amgen, Inc., v. F. Hoffmann-La Roche Ltd.*, 581 F. Supp. 2d 160, 199 (D. Mass. 2008) (finding the claims definite based on the particular evidence presented).

fundamentally at odds with the requirement of claim 1 of the ‘988 patent that the raw scan data “have reference symmetry relative to other Wi-Fi access points in the target area,” and in the ‘694 patent “the database records” themselves “provide reference symmetry”—with no indication at all of a reference point. *See* Google Br. at 12-14; Google Opp. at 6-9. Skyhook makes *no* effort to reconcile the teachings of the specification with the claim language; it merely argues that its (incorrect) reading of the specification should trump what the claims actually say.

Skyhook’s other primary argument is that Figures 5 and 6 give examples of when reference symmetry is present and when it is not, and that Figure 4 (“Chinese postman routing”) shows better reference symmetry around a hypothetical user than does Figure 3 (“Example scanning scenario showing arterial bias”). Skyhook Br. at 16-17. But that is not enough. These examples at the extremes do not give a person of skill in the art any information about where to draw the line between that which infringes and that which does not. When given less stark examples, Dr. Kotz often simply could not determine whether “reference symmetry” was present or not. Second Murphy Decl., Ex. A at 152:4-156:9 and 164:6-173:8 (discussing *id.* Exs. D & E); *see also* Acampora Decl. ¶¶ 70-77; *Halliburton Energy Services, Inc. v. M-I, LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) (“Even if a claim term’s definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.”).

D. “Avoid[s] Arterial Bias” (‘988 patent, claim 1 and ‘694 patent, claim 1)

The phrase “avoid[s] arterial bias” is indefinite if viewed as a term of degree because under such a reading it is impossible for a person of skill in the art to know where to draw the line. As Skyhook points out, Figure 3 in both patents discloses an example showing arterial bias, while Figure 4 shows data gathering using Chinese Postman routing that presumably “avoid[s] arterial bias.” However, the question is not whether a person of skill in the art can recognize the extremes; the question is whether a person of ordinary skill in the art can know the difference between what does and what does not “avoid arterial bias” *Halliburton*, 514 F.3d at 1251. The specification gives no information whatsoever about where to draw the line; only the claims

address how much arterial bias may be present and they say that it must be “avoid[ed].” Unless the claims are understood to require the elimination of arterial bias, they are indefinite.

Skyhook argues that *any* reduction—even a *de minimus* reduction—in the amount of arterial bias constitutes “avoid[ance of] arterial bias” within the meaning of the claims. That is contrary to the same extrinsic evidence Skyhook relies upon, which equates avoid with “eliminate,” and to the specification, which also speaks of “avoid[ing]” arterial bias. *See* Google Br. at 14-15; Google Opp. at 10-11. Moreover, Plaintiff’s proffered standard—“when the claimed technique is practiced, arterial bias is reduced compared to when the claimed technique is not practiced”—is unworkable, and essentially collapses into itself because there is no baseline for the amount of arterial bias present when “the claimed technique” is used versus when it is not. As even Skyhook’s expert admits, the amount of arterial bias varies when using the prior art Random Method of data collection. Second Murphy Decl., Ex. A at 128:15-21 (arterial bias varies in prior art collection methods); *see also* Google Br. at 19-20.

Shatterproof Glass Corp. v. Libby-Owens Ford Co., 758 F.2d 613 (Fed. Cir. 2005), and *Young v. Lumenis, Inc.*, 492 F.3d 1336 (Fed. Cir. 2007), do not aid Skyhook. Although those cases recognize that the level of precision necessary may vary, they do not justify Skyhook’s construction. The inventors could have claimed that the method of traversing the target area “reduces arterial bias,” but they did not. So too could they have omitted any reference to “avoid[s] arterial bias” and simply claimed the Chinese Postman routing technique. But they did require that arterial bias be “avoid[ed].” Skyhook’s inventors should be held to their own description of the invention. *K-2 Corp. v. Salomon SA*, 191 F.3d 1356, 1364 (Fed. Cir. 1999) (“Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee.”).

E. The “Logic” Terms are Means-Plus-Function Limitations that are Indefinite for Failure to Disclose a Corresponding Structure (‘988 patent, claims 1-3).

Skyhook makes a number of flawed arguments in support of its assertion that the “logic” terms are not subject to 35 U.S.C. § 112, ¶ 6. First, Skyhook argues the “logic” terms must recite sufficient structure because both Google and Dr. Acampora have previously, and *in unrelated*

contexts, used the word “logic” to convey structure.⁶ Because “logic” may relate to a structure in one context does not mean the word “logic” *always* implies structure. Skyhook recognized as much in its Opening Claim Construction Brief. Skyhook Br. at 28 (citing *Wiley Electrical and Electronics Dictionary* (2004), which defines “logic” as both “functions performed by a computer” (a functional definition) and “circuits in a computer” (a structural one)).

Skyhook’s argument that “‘logic’ in the context of computers has a meaning that is clearly structural,” Skyhook Opp. at 4, is likewise misplaced. This assertion is directly contrary to the court’s decision in *ABB Automation, Inc. v. Schlumberger Resource Management Services, Inc.*, 2003 WL 1700013, at *1 (D. Del. Mar. 27, 2003), which held each of the “logic” claims that related “to a processor programmed to perform a specific function” were subject to means-plus-function analysis.⁷ Moreover, Skyhook’s reliance on *SuperGuide Corp. v. DirecTV Enters.*, 358 F.3d 870, 895 (Fed. Cir. 2004), is inapposite, as the patent there disclosed “nonvolatile memory,” a well known structure; the ‘988 patent discloses no analogous structure.

The “logic” terms fail to satisfy the requirements of § 112, ¶ 6 as the specification does not disclose any specific formula, algorithm, code, or other structure capable of performing the recited function. *See* Google Br. at 19-21; Acampora Decl. at 35-49 (detailing failure to disclose a corresponding structure); Kotz Decl. ¶¶ 62-85 (no contention that specific steps are disclosed); *Aristocrat Techs. Austral. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1338 (Fed. Cir. 2008) (patentee was required “to at least disclose the algorithm that transforms the general purpose microprocessor to a special purpose computer programmed to perform the disclosed algorithm.”)

⁶ Skyhook relies on an out-of-context snippet from Dr. Acampora’s testimony in its effort to discredit him. Skyhook Opp. at 7. Dr. Acampora testified he has computer programming experience over several decades, and also supervises students engaged in computer programming. Second Murphy Decl., Ex. C at 69:10-71:5. Dr. Kotz similarly distinguished his work as a researcher from more practical tasks, and noted that he would have difficulty writing the code necessary to run, for example, a device driver. *Id.*, Ex. A at 102:12-103:2.

⁷ Contrary to Skyhook’s assertion, *ABB Automation* has not been “effectively overruled.” Skyhook Opp. at 5. In *Apex, Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003), the Federal Circuit held that “circuit . . . connotes some structure,” and not that “logic,” by itself, connotes sufficient structure to avoid the requirements of § 112, ¶ 6.

(quotation omitted). Skyhook’s own expert conceded that an algorithm is analogous to the steps of a recipe, Second Murphy Decl., Ex. B at 46:1-16, and no such steps are disclosed in the ‘988 patent. *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1385 (Fed. Cir. 2009) (“A patentee cannot avoid providing specificity as to structure simply because someone of ordinary skill in the art would be able to devise a means to perform the claimed function.”). Instead of providing the requisite specifics, the patent generally describes some of the characteristics and functions of the relevant algorithms. Acampora Decl. ¶¶ 87-122. This is insufficient under § 112, ¶ 6. *Aristocrat Techs.*, 521 F.3d at 1336 (the specification must disclose either an algorithm to perform the claimed function or “a detailed explanation” of how to “the claimed device would perform the claimed function”); *Stamps.com Inc. v. Endicia, Inc.*, 2011 WL 2417044, at *13 (Fed. Cir. June 15, 2011) (finding claim indefinite as specification failed to disclose “actual algorithms necessary to calculate the transaction value”).

F. “Rules” and “Predefined Rules” in the ‘897 Patent are Indefinite.

Skyhook’s position on the “rules” and “predefined rules” limitations in the ‘897 patent continues to shift. Having first proposed to define “predefined rules” as “predefined rules,” Murphy Decl., Ex. A at 14, but then suggesting a different definition in its papers, Skyhook Br. at 35, Skyhook takes yet a third position in its Opposition. Recognizing that its limitless construction is unsupportable given the written description and enablement requirements of § 112, Skyhook now argues for the first time that “rules” and “predefined rules” *should not* be understood to have their ordinary meaning. Skyhook Opp. at 11; Kotz Decl. ¶ 91.

Rather, Skyhook now argues, the rules must be “based on” something about the recorded location information. That is not what the claims say. Claim 1 requires only that “the recorded location information for each of the observed WiFi access points” be used “*in conjunction with* predefined rules to determine whether an observed WiFi access point should be included or excluded from a set of WiFi access points.” Manning Decl., Ex. F, claim 1 (emphasis added). The plain meaning of the language does not require that the “predefined rules” use some characteristic of the recorded location information as the basis for determining which observed

access points to include or exclude in the set of access points used to calculate the user device location. *K-2 Corp.*, 191 F.3d at 1364. To the contrary, the plain meaning of the language gives *no criteria whatsoever* for that determination. Unless any and every possible decisional criteria is a “rule” within the meaning of the ‘897 patent—a proposition Skyhook expressly denies—then it is simply anyone’s guess what is or is not covered by the ‘897 patent. “Rules and “predefined rules” are indefinite because they do not apprise a person of skill in the art of the scope of the ‘897 patent claims. The ‘897 patent is therefore invalid. *Halliburton*, 514 F.3d at 1251.

G. The Requirement of the ‘245 Patent that the Algorithm be “Suited” to the Number of Identified Wi-Fi Access Points Calls for an Entirely Subjective Determination.

In an effort to save the ‘245 from indefiniteness, Skyhook contends that it “would be readily apparent” to a person of skill in the art “[w]hether a given algorithm is suited for a given number of access points.” Skyhook Opp. at 10. As with “arterial bias” and “reference symmetry,” here too Skyhook attempts to distance itself from the ostensible point of novelty that the Examiner relied upon in allowing the claims to issue. Manning Decl., Ex. I at GSHFED89. Skyhook’s implausible assertion that a person of skill in the art would *just simply know* whether any given algorithm would or would not be “suited” to a particular number of access points does not mean the ‘245 patent is definite. It does, however, mean that the claims of the ‘245 patent were at least obvious, and should never have issued.

As to the specific indefiniteness issue before the Court, Skyhook concedes that there is no information in the patent that would inform the suitability determination. Skyhook Opp. at 11 n.8 (arguing that the patent need not teach “how the number of access points impacts what algorithm is appropriate,” what the possible algorithms are, or identify any algorithm as suited or not suited because these things “would be readily apparent to an ordinary artisan”); *see also* Second Murphy Decl., Ex. A at 187:25-190:3 (the ‘245 patent does not provide any criteria for suitability). Under Skyhook’s reading, it is entirely up to the person of skill to figure out what algorithm, of all possible algorithms, is “suited” to a particular number of Wi-Fi access points

and why it is suited. *See Datamize*, 417 F.3d at 1351 (specification must give “some standard”); *Halliburton*, 514 F.3d at 1251 (claim must give “meaningfully precise” notice of its scope).

Skyhook nevertheless argues that “suited” is not subjective because the person of skill can tell “[w]hich algorithm produces better location.” Skyhook Opp. at 10 (citing no evidence). It is not so simple. First, as Dr. Kotz testified, suitability is often “a matter of degree,” Second Murphy Decl., Ex. A at 195:17-21, and, there are numerous factors that a person of skill in the art would need to consider and balance, *id.* 193:8-194:1. That balancing act necessarily depends on subjective judgment calls. Second, the claim requires that the chosen algorithm be “suited to the number of Wi-Fi access points,” not that it produce “better location.” The problem with “suited” is that there is *no* criteria in the claims or specification by which suitability might be judged, a flaw Dr. Kotz acknowledges. Second Murphy Decl., Ex. A at 187:20-191:1. Skyhook would assume, rather than prove, that suitability depends on producing “better location.” In fact, there could be any number of reasons why a particular algorithm might or might not be “suited” to a number of access points, including faster processing time, ease of implementation, more accurate location calculations, or simply the preferences of the system designer. The ‘245 patent provides no insight whatsoever. *Id.*; Acampora Decl. ¶ 123.

IV. CONCLUSION

Google respectfully requests entry of an order declaring the patents-in-suit indefinite and invalid.

Dated: October 18, 2011

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CERTIFICATE OF SERVICE

I hereby certify that *Google Inc.'s Reply In Support Of Motion For Summary Judgment Of Indefiniteness* filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants via U.S. Mail on October 18, 2011.

/s/ Susan Baker Manning
Susan Baker Manning