

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

GEOSCOPE TECHNOLOGIES PTE. LTD.,
Patent Owner.

IPR2023-01212
Patent 8,406,753 B2

Before PATRICK R. SCANLON, SHEILA F. MCSHANE, and
BRIAN D. RANGE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Google LLC (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1, 7, 9, 32, 28, and 40 (the “challenged claims”) of U.S. Patent No. 8,406,753 B2 (Ex. 1001, “the ’753 patent”). Geoscope Technologies Pte. Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 10 (“Prelim. Resp.”). With the Board’s leave, Petitioner filed a Reply (Paper 12, “Pet. Prelim. Reply”) to the Preliminary Response, and Patent Owner filed a Sur-reply (Paper 13, “PO Prelim. Sur-reply”).

The Board has authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information in the petition and the preliminary response “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons stated below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one claim. We therefore institute *inter partes* review as to all of the challenged claims of the ’753 patent and all of the asserted grounds of unpatentability in the Petition.

II. BACKGROUND

A. Related Matters

The parties identify the following matters as related to this proceeding:

Geoscope Technologies Pte. Ltd. v. Google LLC f/k/a Google Inc., No. 1:22-cv-01331-MSN (E.D. Va.) (filed Nov. 22, 2022) (“Google action”); and

Geoscope Technologies Pte. Ltd. v. Apple Inc., No. 1:22-cv-01373-MSN (E.D. Va.) (filed Dec. 1, 2022) (“Apple action”).

Pet. 2; Paper 11, 1.

Patent Owner additionally identifies the following matters as related to this proceeding:

Google LLC. v. Geoscope Technologies Pte. Ltd., IPR2023-01209, IPR2023-01210, and IPR2023-01211 (PTAB) (filed Aug. 10, 2023);

Google LLC. v. Geoscope Technologies Pte. Ltd., IPR2023-01213 (PTAB) (filed Aug. 9, 2023);

Geoscope Technologies Pte. Ltd. v. Google LLC, No. 24-1003 (Fed. Cir.) (docketed Oct. 2, 2023);

Geoscope Technologies Pte. Ltd. v. Apple, Inc., No. 24-1018 (Fed. Cir.) (docketed Oct. 5, 2023); and

Apple Inc. v. Geoscope Technologies Pte. Ltd., IPR2024-00031 and IPR2024-00032 (filed Oct. 31, 2023); and

Apple Inc. v. Geoscope Technologies Pte. Ltd., IPR2024-000255 (PTAB) (filed December 1, 2023); and

Apple Inc. v. Geoscope Technologies Pte. Ltd., IPR2024-000259 (PTAB) (filed December 6, 2023).

Paper 11, 1–2.

B. The '753 Patent (Ex. 1001)

The '753 patent, titled “System and Method for Generating A Location Estimate Using Uniform and Non-Uniform Grid Points,” issued March 26, 2013. Ex. 1001, codes (45), (54). The '753 patent “relates to the

problem of estimating the location of a wireless mobile device using information from one or more Network Measurement Reports (“NMRs”) . . . generated by a wireless communications network or the mobile device.” *Id.* at 1:15–23. As background, the ’753 patent describes “a need to streamline the [location determination] process in order to efficiently and effectively handle the vast amount of data being sent between the wireless communications network and the large number of mobile devices for which locations are to be determined.” *Id.* at 2:22–26. Accordingly, the ’753 patent aims to “overcome[] the limitations of the prior art by estimating the location of a wireless mobile device using . . . one or more pre-existing . . . NMRs . . . which include calibration data for a number of locations within a geographic region.” *Id.* at 2:25–31.

The ’753 patent explains that the method of the invention includes providing calibration data for points in a geographic region, with the calibration data including characterizing parameters such as a signal strength measurement. Ex. 1001, 51:16–19, 9:59–63. The method further includes receiving at least one Network Measurement Report (NMR) from a mobile device at an unknown location, generating “sets of grid points for the calibration data,” and evaluating the NMRs “with each of the sets of grid points as a function of select ones of the characterizing parameters.” *Id.* at 51:19–27. In the method, “[a] set of grid points . . . as a function of a predetermined criteria” may be selected and the location of the mobile device in the geographic region is determined “as a function of the selected set of grid points.” *Id.* at 51:27–31. Figure 67 of the ’753 patent, reproduced below, depicts this process.

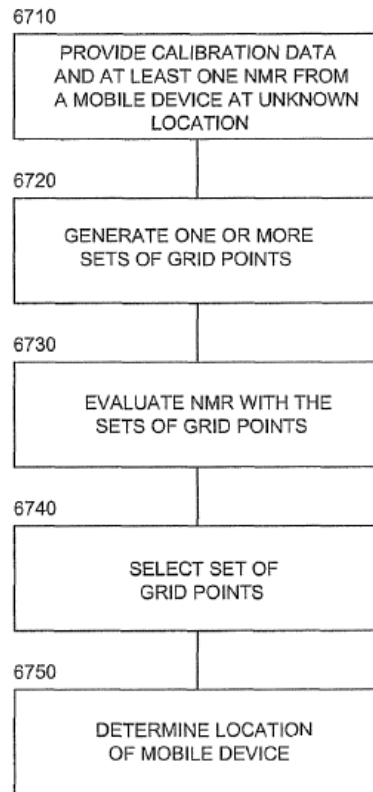


FIG. 67

Figure 67, above, depicts “a flow chart for a method of determining the location of a mobile device in a geographic region according to one embodiment.” Ex. 1001, 51:13–15.

C. The Challenged Claims

Petitioner challenges claims 1, 7, 9, 32, 28, and 40 of the ’753 patent. Pet. 6. Claims 1 and 32 are independent claims. Claim 1 is illustrative of the claimed subject matter and is reproduced below, with bracketed designations added for reference purposes.

1. A method of determining the location of a mobile device in a geographic region comprising the steps of:

[1.1] providing calibration data for each of one or more calibration points in a geographic region, said calibration data having one or more characterizing parameters;

[1.2] generating one or more sets of grid points for said calibration data;

[1.3] receiving at least one network measurement report from a mobile device at an unknown location in said geographic region;

[1.4] evaluating said at least one network measurement report with each of said sets of grid points as a function of select ones of said characterizing parameters;

[1.5] selecting a set of grid points as a function of a predetermined criteria; and

[1.6] determining the location of a mobile device in said geographic region as a function of said selected set of grid points.

Ex. 1001, 59:14–31.

D. Asserted Grounds of Unpatentability

Petitioner asserts the following challenges to patentability :

Claims Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1, 7, 9, 32, 38, 40	102(b)/103(a)	Spain ² , as evidenced by Agiwal ³

Pet. 6.

III. DISCRETIONARY DENIAL

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Patent Owner requests that we exercise our discretion under 35 U.S.C. § 314(a) to deny institution. Prelim. Resp. 14–27; PO Prelim. Sur-reply 1–5. Patent Owner generally contends that the two related district court litigations, the Google action and the Apple action, “have already resulted in final judgments based on the district court’s ruling that the asserted claims are unpatentable pursuant to 35 U.S.C. § 101.” Prelim. Resp. 1–2. Patent Owner asserts that because final judgments have already been reached by the

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103, effective March 16, 2013. Because the application and provisional application for the ’753 patent were filed before this date, the pre-AIA version of §§ 102, 103 apply. *See* Ex. 1001, codes (22), (60). Petitioner does not dispute that the filing date of the provisional application filing date applies at this juncture. *See* Pet. 6.

² US 2003/0064735 A1, published April 3, 2003 (Ex. 1006).

³ Ankur Agiwal, *LOCATOR – Location Estimation System For Wireless LANs*, WMASH 2004: Proceedings of the Second ACM International Workshop on Wireless Mobile Applications and Services on WLAN Hotspots, 102–109 (2004) (Ex. 1005).

district court's rulings, institution should be denied in view of the *Fintiv* factors. *Id.* at 14; PO Prelim. Sur-reply 1–4.

Under Section 314(a), the Director has discretion to deny institution. *See* 35 U.S.C. § 314(a) (stating “[t]he Director *may not* authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition”) (emphasis added); 37 C.F.R. § 42.108(a) (stating “the Board will authorize the review to proceed”); *cf.* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

The Board’s precedential decision in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”) sets forth six factors that we consider as part of this balanced assessment when determining whether to use our discretion to deny institution:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and

6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Fintiv at 6. Recognizing that “there is some overlap among these factors” and that “[s]ome facts may be relevant to more than one factor,” the Board “takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* In determining whether to discretionarily deny institution under § 314(a), the Board applies the guidance set forth in the USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (“Guidance Memo”) (June 21, 2022).⁴

The district court in the Google action and the Apple action ruled that Claims 1 and 32 of the ’753 patent are patent ineligible under § 101. Ex. 2003, 19–23; Ex. 2004, 19–23. The district court entered judgment on the patent eligibility in both cases. Ex. 2005; Ex. 2006. Patent Owner appealed the district court’s patent ineligibility decisions to the United States Court of Appeals for the Federal Circuit, arguing that claims 1 and 32 of the ’753 patent are patent eligible under § 101. *See* Ex. 1030.

We consider the *Fintiv* factors in view of the status of the related district court actions and appeal.

1. Factor 1 - whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

Patent Owner asserts that the Board should exercise its discretion to deny institution because institution would be an “inefficient use of Board

⁴ Available at

https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf

resources.” Prelim. Resp. 14. Patent Owner argues that the two district court litigations (the Google and Apple actions) are not just at advanced stages but, in fact, “have ***already resulted in final judgments*** stemming from the district court’s ruling that the asserted claims are unpatentable pursuant to 35 U.S.C. § 101.” *Id.* Patent Owner asserts that there can be no stay because “the district court ***cannot*** stay the litigation given the posture [of the district court case].” *Id.* at 19 (citing *Snap Inc. v. Blackberry Ltd.*, IPR2020-00391, Paper 8 at 13 (PTAB July 13, 2020); *AviaGames, Inc. v. Skillz Platform, Inc.*, IPR2022-00530, Paper 12 at 12 (PTAB Aug. 9, 2022)).

Petitioner argues that the “fact that the District Court has determined that certain claims challenged in this IPR are invalid under § 101 does not automatically trigger discretionary denial or necessitate a finding that the *Fintiv* factors weigh in favor of discretionary denial.” Pet. Prelim. Reply 1 (citing *Volvo Penta of the Americas, LLC v. Brunswick Corp.*, IPR2022-01366, Paper 15⁵ (PTAB May 2, 2023)). Petitioner asserts that the district court only made determinations on § 101 issues, now on appeal, so “there is no overlap of issues between the Federal Circuit appeal and the grounds presented in this IPR.” *Id.* at 2. Petitioner contends that Patent Owner “can only speculate as to the outcome of the Federal Circuit appeal and the timing and scope of any remand.” *Id.* at 3.

As an initial matter, we do not agree with Patent Owner’s arguments that because judgements have been entered in the district court actions, there is finality as that relates to *Fintiv* issues. In a similar instance in *Volvo*, where a district court’s § 101 determination was appealed to the Federal

⁵ Petitioner refers to Paper 16, however, the correct reference appears to be Paper 15.

Circuit, the Director determined that the Board had the authority to institute an *inter partes* review and a *Fintiv* analysis should be performed. *See Volvo*, IPR2022-01366, Paper 15 at 1–8. The Director has additionally distinguished a *Fintiv* analysis under similar circumstances to those here, where “the district court’s judgment of invalidity under 35 U.S.C. § 101, i.e., a statutory ground that could not have been raised before the Board, does not raise concerns of inefficient duplication of efforts or potentially inconsistent results between the Board and the district court.” *AviaGames*, IPR2022-00530, Paper 14 at 3. Further, the Director determined that, “the challenged claims have not yet been cancelled and remain in force until the opportunity to appeal has been exhausted,” noting that “[b]y the time an appeal will have concluded, Petitioner will be barred under 35 U.S.C. § 315(b) from bringing a new challenge in an IPR petition.” *Id.* at 3–4.

Fintiv states that “a district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.” *Fintiv* at 6. In view of the circumstances, we do not discern that the § 101 issues addressed in the Federal Circuit appeal would duplicate the anticipation and obviousness issues addressed here. We also agree with Petitioner that the timing of the progress of the appeal and any potential remand to the district court is uncertain. Accordingly, given the limited § 101 issues on appeal, we do not discern there are any concerns about duplication of efforts. Moreover, because of the uncertainty of the timing of any remand from the Federal Circuit to the district court to address any anticipation or obviousness issues, the present circumstances with a

pending appeal effectively act as a stay on the assessment of invalidity issues.⁶

Thus, we determine that this factor weighs against the exercise of discretionary denial.

2. Factor 2 - proximity of the court's trial date to the Board's projected statutory deadline for a final written decision

Patent Owner asserts that the district court has completed its consideration of the '753 patent, which is months before the Board would even institute review, much less issue a final written decision here. Prelim. Resp. 20. Petitioner contends that "[b]ecause there is no District Court trial date, any attention to invalidity under §§ 102/103 is more likely to be resolved in a Final Written Decision well before the District Court addresses any validity and/or infringement issues on remand." Pet. Prelim. Reply 3.

At this time, there is no district court trial date scheduled. Further, the date of any potential trial related to anticipation or obviousness challenges is uncertain if there is a remand after appeal, but it is likely that any potential trial would occur after the completion of this proceeding.

Accordingly, we determine that this factor weighs against the exercise of discretionary denial.

⁶ Patent Owner argues that the panel decisions in *Snap* and *AviaGames* found that factor 1, as well as factors 2–6, favor the exercise of discretionary denial. Prelim. Resp. 17–27 (citing *Snap*, IPR2020-00391, Paper 8; *AviaGames*, IPR2022-00530, Paper 12); *see also* PO Prelim. Sur-reply 2. Other panels decisions are not binding, but more importantly, the earlier cases did not have the benefit of the guidance provided by the Director's decisions in *Volvo* and *AviaGames*. *Volvo*, IPR2022-01366, Paper 15; *AviaGames, Inc.*, IPR2022-00530, Paper 14 (remanded to the panel only on the issue of whether the challenge's merits were compelling).

3. Factor 3 - investment in the parallel proceeding by the court and the parties

Patent Owner asserts that this action has been concluded as a result of the § 101 ruling by the district court. Prelim. Resp. 20. Patent Owner argues that prior to the § 101 ruling, the parties has already made substantial investment in the litigation. *Id.* at 21. Patent Owner contends that the district court has already issued a claim construction order and fact and expert discovery have been completed, including the conclusion of extensive written discovery, depositions of fact and expert witnesses, and expert reports addressing invalidity issues for the '753 patent. *Id.*

Petitioner asserts that it was diligent in filing the Petition. Pet. 41. Petitioner contends that Patent Owner preliminarily identified the asserted claims on March 27, 2023, which were subsequently amended on May 10, 2023 and June 12, 2023. *Id.* Petitioner argues that it filed the Petition less than three months after being made aware of the full set of asserted claims. *Id.* In response, Patent Owner asserts that the Petition challenges every asserted claim identified in Patent Owner's preliminary identification of asserted claims served on March 27, 2023, so the change in the assertion of claims had no bearing on the Petition. Prelim. Resp. 22. Thus, Patent Owner argues, Petitioner's contention that its diligence in filing its Petition outweighs any investment in the litigation is incorrect. *Id.*

The parties in the district court proceedings have invested significant resources prior to the § 101 ruling, including the completion of claim construction and fact and expert discovery. Putting the later amendments aside, Petitioner filed the Petition in early August, less than less than six months after the earliest notice of the asserted claims, which was in late March, 2023. We find that this timeliness demonstrates Petitioner's

diligence. Weighing these issues, that is, the investment in resources and the diligence in Petitioner filing the Petition, we determine that this factor slightly favors discretionary denial.

4. Factor 4 - overlap between issues raised in the petition and in the parallel proceeding

Patent Owner asserts that the prior art relied upon in this proceeding, Spain and Agiwal, are also relied upon by Petitioner in the Google action. Prelim. Resp. 24.

Petitioner argues that the Petition asserts additional claims that are not at issue in the district court order and Federal Circuit appeal. Pet. Prelim. Reply 3–4. Petitioner contends that when additional claims are challenged this weighs against discretionary denial. *Id.* (citing *Samsung Bioepis Co., Ltd. v. Regeneron Pharma, Inc.*, IPR2023-00739, Paper 9 (PTAB Oct. 20, 2023)). Patent Owner argues that the additional claims challenged here were not addressed by the district court because Patent Owner withdrew its assertion of them in June, 2023, which is prior to the filing of the Petition. PO Prelim. Sur-Reply 3. Patent Owner asserts that “if the Petition is denied on *Fintiv* grounds, Patent Owner will not re-assert any challenged claims that were previously withdrawn from Patent Owner’s infringement assertion against Petitioner, including dependent claims 7, 9, 38, and 40.” *Id.* Patent Owner contends that its proposed stipulation “diminishes the significance of the non-overlapping claims.” *Id.* (quoting *Samsung Elecs. Co., Ltd. v. Mojo Mobility Inc.*, IPR2023-01092, Paper 11 at 15 (PTAB Jan. 8, 2024)). Patent Owner further asserts that even if there are additional claims challenged, instituting here may still be inefficient and would require that the Board expend significant resources. *Id.* at 3–4. Patent Owner also distinguishes *Samsung Bioepis* by arguing that in that case the Board relied

on petitioner's arguments regarding differences between the claims addressed by the district court and the additional challenged claims, but Petitioner has not attempted to explain any differences here. *Id.* at 4.

It appears that it was Patent Owner who originally asserted the claims challenged here in the district court litigation on March 27, 2023, as discussed under factor 3 above. Although Patent Owner amended its assertions in May and June, 2023, given this timing, it is understandable that the preparation of the Petition, filed in early August, 2023, may have included all the originally-asserted claims. At this juncture, Patent Owner offers a stipulation to not reassert any challenged claims in the district court to reduce inefficiencies, but only if institution is denied here. We decline to afford significant weight to Patent Owner's stipulation in view of its contingent nature, as well as in view of the changing assertions that were made at Patent Owner's discretion in the district court action.

Because additional claims are challenged here that are not at issue in the district court order and Federal Circuit appeal, we determine that this factor weighs against the exercise of discretionary denial.

5. Factor 5 - whether the petitioner and the defendant in the parallel proceeding are the same party

Petitioner here is the same as the named party in the Google action. Accordingly, factor 5 weighs in favor of exercising our discretion to deny institution.

6. Factor 6 - other circumstances that impact the Board's exercise of discretion, including the merits

Patent Owner argues that the merits of Petitioner's challenges are lacking. Prelim. Resp. 26. Patent Owner further asserts that because the

challenged patent has been found invalid in the district court, this weighs in favor of denying institution. *Id.* at 26–27.

As discussed above, because there is no overlap of issues between this proceeding and the district court’s judgment, we do not find the court’s invalidity finding to be relevant to the issue of discretionary denial. Moreover, as discussed below, we determine that the merits of the Petition meet the standard for institution.

Accordingly, we determine that this factor is neutral.

7. Conclusion

The weight of factors 1, 2, and 4 outweigh the remaining factors. Thus, based on our assessment of the *Fintiv* factors, we decline to exercise our discretion under 35 U.S.C. § 314(a) to deny *inter partes* review.

B. Discretionary Denial Under 35 U.S.C. § 325(d)

Pursuant to 35 U.S.C. § 325(d), in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” In evaluating arguments under § 325(d), we use

[a] two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH,
IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential)

(“*Advanced Bionics*”); *see also* *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential as to Section III.C.5, first paragraph) (listing factors to consider in evaluating the applicability of § 325(d)) (“*Becton, Dickinson*”).

As to the first prong of the *Advanced Bionics* assessment, Patent Owner contends that Petitioner relies on a single prior art reference, Spain, that was considered by the Patent Office during the prosecution of the ’753 patent. Prelim. Resp. 4. Specifically, Patent Owner contends that the Examiner considered Spain, as evidenced in the Information Disclosure Statement. *Id.* (citing Ex. 1002, 18).

Petitioner argues that this type of consideration, that is, listing in an Information Disclosure Statement, is insufficient to support the exercise of discretion to not institute. Pet. 43–44. Petitioner cites several cases to support its position, but these cases were either decided prior to *Advanced Bionics* being made precedential or instead refer to consideration of listing a reference as a part of an Information Disclosure Statement in the consideration of the second prong of *Advanced Bionics*, and not the first prong. *See id.* (citing *Amgen Inc. v. Alexion Pharm., Inc.*, IPR2019-00740, Paper 15 (PTAB August 30, 2019); *Scientific Design Co. v. Shell Oil Co.*, IPR2021-01537, Paper 7 (PTAB Mar. 18, 2022); *Scientific Design Co. v. Shell Oil Co.*, IPR2022-00158, Paper 7 (PTAB Apr. 4, 2022)). Instead, we agree with Patent Owner that consideration of prior art identified in an Information Disclosure Statement may be sufficient to meet prong one of *Advanced Bionics*, and we find that to be the case here because Spain is the only prior art that Petitioner relies upon in its challenges. *See* Prelim. Resp. 5; *Advanced Bionics* at 7–8.

For the second prong of *Advanced Bionics*, we consider whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims. *Becton, Dickinson* factors (c), (e), and (f) are factors that may be used in the evaluation of this prong.⁷ See *Advanced Bionics* at 10.

Relevant to factor(c), Patent Owner asserts that prosecution history shows that “[t]he Examiner clearly analyzed Dressler,” which is a patent related to Spain through a common application, where Patent Owner contends that Dressler “has extensive overlap with Spain.” Prelim. Resp. 7, 10; see also Pet. 45–46 (citing Ex. 1002, 56). Patent Owner further argues that the Examiner considered other references that have the same disclosures as Spain to disclose “generating one or more sets of grid points for said calibration data.” Prelim. Resp. 12 (citing Ex. 1002, 16, 17 (references which the Examiner initialed in an Information Disclosure Statement)).

Petitioner contends that Spain is not the same prior art as Dressler because Spain includes significant amounts of additional material that Petitioner relied upon in its challenge. Pet. 44–45 (citing Ex. 1006 ¶¶ 64–

⁷ *Becton, Dickinson* identifies the following non-exclusive factors: (a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which petitioner relies on the prior art; (e) whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments. *Becton, Dickinson*, IPR2017-01586, Paper 8 at 17–18.

65, 67, 82–84, 70–72, 80, Fig. 15; Ex. 1016). Petitioner also argues that the Examiner’s rejection citing Dressler was limited only to a rejection for limitations of dependent claims that are not found in the challenged claims. *Id.* at 45–46. Petitioner further asserts that the Examiner’s application of Dressler focused on its use of an “adaptation algorithm,” and the Petition does not rely on that common disclosure in Spain, but rather relies upon its disclosure of interpolation for populating its RF Fingerprint database. *Id.* at 46.

As Petitioner asserts, in the prosecution history, Dressler is only referred to for the rejection of dependent claims for limitations not found in the challenged claims. Ex. 1002, 56; *see also* Pet. 45–46; PO Resp. 9–10. Further, Petitioner points out that the Examiner’s reliance on Dressler was for a disclosure that is common to Spain, but is not relied upon in the Petition. Pet. 45–46, Ex. 1006 ¶ 53. As such, there is no evidence in the prosecution history that the Examiner’s reliance on Dressler is related to any issue in the challenges here. Moreover, while the Examiner’s reference to Dressler infers that the Examiner performed some evaluation of that reference, Spain contains additional disclosures that are not in Dressler. *See* Ex. 1006 ¶¶ 64–65, 67, 82–84, 70–72, 80, Fig. 15; Ex. 1016. Accordingly, any evaluation of Dressler does not reflect a full evaluation of Spain. There is no support in the prosecution history of an evaluation of Spain, except for the Examiner’s initialization of an Information Disclosure Statement, which is not indicative of a substantive evaluation. Similarly, the references to the prior art disclosures alleged by Patent Owner to be the same as Spain were only initialed on Information Disclosure Statements. *See* Prelim. Resp. 12.

Accordingly, the record does not provide support that Spain was substantively evaluated by the Examiner during prosecution.

As to factors (e) and (f), Petitioner asserts that the Examiner's consideration of Spain during prosecution was underdeveloped and the Examiner overlooked its disclosures, hence the Examiner erred. Pet. 47–48. As to additional evidence and facts, Petitioner contends that the Petition is supported by Dr. William's declaration which explains how a person of ordinary skill in the art would have understood Spain. *Id.* at 48.

Patent Owner contends that the Board need not assess the merits of a petition where a petitioner has not sufficiently explained the basis for the assertion of material error, and Petitioner cannot meet its burden to show material error by the Examiner with its generic assertion. Prelim. Resp. 13 (citing *Google LLC v. Valtrus Innovations Ltd.*, IPR2022-01197, Paper 18 at 20–23 (PTAB June 13, 2023)). Patent Owner also asserts that Petitioner's contention that its expert report constitutes new evidence is insufficient and “merely parrots the Petition.” *Id.* at 14 (citing *Juniper Networks, Inc. v. Mobile Telecomms. Techs., LLC*, IPR2017-00642, Paper 31 at 23 (PTAB Mar. 14, 2018)).

We agree with Petitioner that the prosecution history does not provide evidence that the Examiner fully considered all the disclosure of Spain. Unlike *Google*, this is not a situation where the Board declined to mine the record because Petitioner did not explain the Examiner error. *See Google*, IPR2022-01197, Paper 18, 22. Instead, the record is sparse; it is undisputed that Spain is only identified in an Information Disclosure Statement and

there are no rejections or discussions of Spain in the prosecution history.⁸ Further, the present record before us includes testimonial evidence in Dr. Williams’s declaration relevant to an understanding of Spain that was not available during prosecution. This circumstance is distinguishable from *Juniper*, where an expert declaration was not sufficient to overcome the circumstances of that patent prosecution, where there was “substantive discussion and studied evaluation” of prior art by the Examiner—which is not the case here. *See Juniper*, IPR2017-00642, Paper 24 at 12. Additionally, as discussed below, the present record now contains the district court’s construction of certain claim terms, undisputed by the parties (*see* Pet. 19; Prelim. Resp. 39), which provides additional basis for the evaluation of Spain.

Considering factors (c), (e), and (f) together, we conclude that Petitioner sufficiently demonstrates Examiner error based on the grounds in its Petition, with support from expert testimony, which shows that the Examiner overlooked or did not appreciate the materiality of Spain’s disclosures. We conclude that the circumstances presented here do not warrant us exercising our discretion to deny institution based on § 325(d).

IV. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art:

would have been someone knowledgeable in wireless networks, cellular radio systems, mobile communication devices and radio navigation systems. That person would have at least a bachelor’s degree in electrical engineering, with a background in radio

⁸ Again, as discussed above, Dressler has essentially the same disclosures as Spain, however, Spain includes additional disclosures.

frequency communications and/or navigation system technology as well as approximately two years of industry experience working on radio communication and/or navigation systems.

Pet. 18 (citing Ex. 1008 ¶ 44). Patent Owner adopts Petitioner’s asserted level of ordinary skill in the art. Prelim Resp. 38–39.

For the purposes of this Decision, we adopt the assessment offered by Petitioner as it is consistent with the ’753 patent and the prior art before us. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

B. Claim Construction

In this *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2022). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

The district court issued claim constructions in the Google action for all disputed terms of the ’753 patent claims at issue. Ex. 1028. Petitioner uses the district court’s construction for the terms: “calibration data,” “calibration points,” “grid point,” “network measurement report,” and the

order of the “providing,” “generating,” “evaluating,” and “selecting” steps of claim 1. Pet. 19–21 (citing Ex. 1008 ¶ 54; Ex. 1024, 1, 2; Ex. 1028, 8, 18, 20). Petitioner proposes that any other claim terms not addressed by the district court should be interpreted consistent with the *Phillips* standard. *Id.* at 19.

Patent Owner “does not dispute Petitioner’s statement on claim construction for the purposes of [the] Preliminary Response” and “reserves the right to present arguments on the constructions should the Petition be instituted.” Prelim. Resp. 39.

For the purposes of this Decision, we will use the district court’s claim constructions, which have been agreed to by the parties at this juncture. We determine that we need not expressly construe any claim terms at this juncture. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Principles of Law

A claim may be invalid as anticipated by a prior art reference if “each and every limitation is found either expressly or inherently in a single prior art reference.” *Sanofi–Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006). Anticipation under § 102 may be established by showing, as a matter of fact, that all elements arranged as specified in a claim are disclosed within the four corners of a reference, either expressly or inherently, in a manner enabling one skilled in the art to practice an embodiment of the

claimed invention without undue experimentation. *See ClearValue, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340, 1344 (Fed. Cir. 2012).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).⁹

D. Anticipation of Claims 1, 7, 9, 32, 38, and 40 by Spain

Petitioner contends that claims 1, 7, 9, 32, 38, and 40 would have been anticipated by Spain. Pet. 22–39. To support its contentions, Petitioner provides explanations as to how the combination of the prior art discloses each claim limitation. *Id.* Petitioner also relies upon the Williams Declaration (Ex. 1008) to support its positions.

We begin our discussion with a brief summary of Spain, and then address the evidence and arguments presented.

1. Spain (Ex. 1006)

Spain generally relates to a “method for determining the location estimate of a . . . mobile unit[] in a wireless communication network” using

⁹ No evidence of objective indicia of nonobviousness is presented by Patent Owner. *See generally* Prelim. Resp.

RF fingerprinting. Ex. 1006, code (54), ¶¶ 30, 35, 47. When a location estimate of the mobile unit is desired, the mobile unit uses a fingerprint capture component to capture spectral information and generates a spectral fingerprint using one or more parameters, such as signal strength. *Id.* ¶¶ 40–41; *see also id.*, Fig. 2. Spain describes “utilizing a fingerprint database” stored in the mobile unit “that contains a number of fingerprints along with their corresponding location identities.” *Id.* ¶ 47. In one embodiment, “[t]he generated fingerprint is compared with the fingerprints in the database and the fingerprint in the database that is closest to the generated fingerprint is selected as the match,” and “[t]he corresponding location in the database is then chosen as the location of the mobile unit.” *Id.*

The fingerprint database may be “built by taking fingerprint measurements at predetermined locations and using intelligent algorithms that interpolate the fingerprints at all locations in between the sampled locations.” Ex. 1006 ¶ 101. For example, “[t]o improve the accuracy of the fingerprint database,” Spain describes using a learning/training technique in which a “[r]egression can be used to learn each mapping of position versus fingerprint,” a “complete grid of locations for the cellular service area will be used as training data,” and “a new grid is generated for the database” by “interpolat[ing] between grid points and reconstruct[ing] the grid.” *Id.*

¶¶ 54–55. Spain also describes that, “[i]n one instance, [a] fingerprint [in the fingerprint database] corresponds not to one exact spot on the surface of the earth, but instead to a small area,” where “[t]he Lat and Long fields [associated with the fingerprint] . . . indicate a position inside the area, preferably the center point.” *Id.* ¶ 99, Fig. 10.

Figure 3 of Spain is reproduced below.

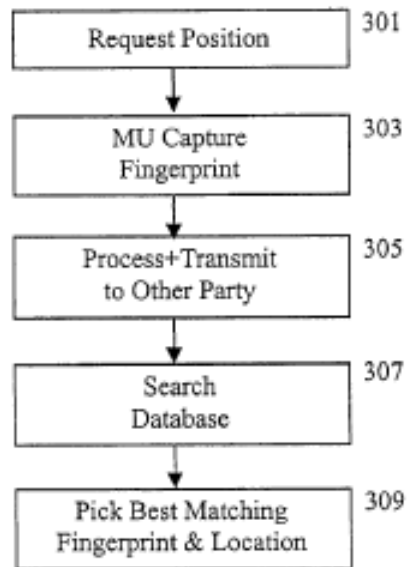


Fig. 3

Ex. 1006, Fig. 3. Figure 3 of Spain, above, depicts a flow chart of its position determining process according to one embodiment. *Id.* ¶ 13. As shown in Figure 3, Spain’s process generates a request for position of the mobile unit, where “[o]n receipt of the request, the mobile unit captures the fingerprint of its current location,” then processes the captured fingerprint, then transmits the fingerprint over the wireless link to the location server, with the location server then searching its database for the closest matching fingerprint, and then retrieves the best matching fingerprint along with its corresponding location. *Id.* ¶ 49.

2. Discussion

a. Claim 1

Below we consider the claim 1 limitations in turn.

i. Limitation I[pre]

Petitioner asserts that Spain discloses “[a] method for determining the location of a mobile unit (mobile unit) in a wireless communication system.” Pet. 23 (citing Ex. 1006, code (57); Ex. 1008 ¶¶ 69–70).

Patent Owner presents no arguments specifically related to the preamble. *See generally* Prelim. Resp.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that Spain discloses the preamble of claim 1.¹⁰

ii. Limitation [I.1]

Petitioner asserts that Spain discloses that a “fingerprint” is created by providing a “predetermined combination of observable RF spectral parameters,” such as “observed signal strengths,” with longitude and latitude obtained for each fingerprint entry. Pet. 23 (citing Ex. 1006 ¶¶ 35, 99, Fig. 10; Ex. 1008 ¶¶ 71–72). Petitioner contends that “Spain’s fingerprints are provided for calibration points, as ‘geographic points with which calibration data is associated,’” under the construction in the district court litigation.¹¹ *Id.* at 24.

Patent Owner presents no arguments specifically related to this limitation. *See generally* Prelim. Resp.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that

¹⁰ We need not determine whether the preamble of claim 1 is limiting because Petitioner has shown that Spain teaches the preamble.

¹¹ The term “calibration points” was stipulated by the parties to mean “[g]eographic points with which calibration data is associated” in the Google action. Ex. 1024, 1.

Spain discloses limitation [1.1].

iii. Limitation [1.2]

Petitioner asserts that Spain discloses sets of grid points where each set includes newly interpolated grid points. Pet. 24–25. Petitioner relies upon Spain’s disclosures where “learning/training techniques and methodologies can be adopted” and “[t]he machine is then re-trained and a new grid is generated for the database,” with an advantage of “offer[ing] a way to interpolate between grid points and reconstruct the grid.” *Id.* at 25–26 (citing Ex. 1006 ¶¶ 54–55, 101; Ex. 1008 ¶¶ 75–76) (emphasis omitted). Petitioner also refers to Spain’s disclosure that “the fingerprint corresponds not to one exact spot on the surface of the earth, but instead to a small area,” with the latitude and longitude fields indicating a position inside the area. *Id.* at 27 (citing Ex. 1006 ¶ 99) (emphasis omitted).

Patent Owner asserts that Spain fails to disclose or teach this limitation. Prelim. Resp. 33–47. Patent Owner contends that Spain is deficient because Figures 9 and 10 “illustrate how the locations in the fingerprint database correspond to locations where measurements are *collected*, not locations that are generated based on analysis of the measurements.” *Id.* at 40–41 (citing Ex. 1006 ¶ 99, Figs. 9, 10). Patent Owner argues that Spain’s fingerprint database is made up only of “calibration points,” that is, locations where data is measured and collected. *Id.* at 41 (citing Ex. 1001, 9:56–59). Patent Owner contends that “[t]his is a critical flaw in Petitioner’s argument because the claim expressly distinguishes ‘calibration points’ from ‘grid points.’” *Id.* Patent Owner asserts that the grid points are not points where data was collected, but rather “grid points are generated based on analysis of gathered calibration data.”

Id. at 41–42 (citing Ex. 1001, 2:31–23). Patent Owner alleges that Petitioner’s characterization of Spain indicates that Petitioner has conflated calibration points and grid points. *Id.* at 42 (citing Pet. 26).

Patent Owner also contends that, even if interpolated grid points were considered, Petitioner’s arguments fail because Petitioner mischaracterizes Patent Owner’s position to the extent that there is a suggestion that “this limitation is met by generating any ‘random’ point.” Prelim. Resp. 43. Patent Owner further contends that there is “a key distinction between the interpolated fingerprints of Spain and the ‘grid points’ of the ’753 Patent.” *Id.* at 44. Patent Owner asserts that the claimed grid points are generated based on an analysis of calibration data. *Id.* (citing Ex. 1001, code (57), 9:34–40, 12:9–14; Ex. 1028, 19). Patent Owner contends that in Spain, however, the interpolated fingerprints are used to fill in missing fingerprint measurements at predetermined locations, and Petitioner points to no disclosure showing that the location for the interpolated fingerprint is determined or tied to an analysis of calibration data. *Id.* at 44–45. Patent Owner argues that interpolations occurring at all locations is meaningless unless the locations have all been determined and defined. *Id.* at 45. Further, Patent Owner asserts, “the location in the database associated with measured or interpolated fingerprint data is predetermined and defined independently of any calibration data.” *Id.*

Patent Owner also contends that Petitioner ignores that the claim recites “generating . . . grid points for said calibration data.” Prelim. Resp. 46. Patent Owner also argues that Petitioner “fails to meaningfully address how Spain satisfies the district court’s construction of ‘grid point’ requiring it to be associated with ‘representative calibration data for an area.’” *Id.*

Patent Owner argues that “[a]t best, Petitioner shows that Spain teaches a point that corresponds to an area.” *Id.* Further, Patent Owner contends that Petitioner does not address anything about “representative calibration data” and what it means for calibration data to be “representative.” *Id.* at 46–47.

On this record, Petitioner has presented sufficient evidence that Spain discloses limitation [1.2]. Although Patent Owner states that it does not dispute Petitioner’s adoption of the district court’s constructions for the purposes of the Preliminary Response (Prelim. Resp. 39), the majority of Patent Owner’s arguments are attempts to reargue the claim construction of the term “grid point.” For instance, Patent Owner argues that grid points must be generated based on analysis of calibration data. *Id.* at 41–42, 44, 46. Patent Owner also contends that Spain’s locations for interpolated fingerprints have to be determined or tied to an analysis of calibration data. *Id.* at 44–45. Relatedly, Patent Owner suggests that random points cannot be grid points. *Id.* at 43. Further, Patent Owner asserts that the interpolations are meaningless unless the locations have all been determined and defined and the location has to be “predetermined and defined independently of any calibration data.” *Id.* at 45.

The district court determined that the claim term “grid point” should be construed as “a point associated with representative calibration data for an area.” Ex. 1028, 20. The district court noted that the support that Patent Owner¹² relied upon in its proposed claim construction “is drawn is directed more toward what *must be done* to arrive at a grid point or set of grid points rather than what a grid point *is*”—and the district court declined to adopt

¹² Patent Owner is the plaintiff in the Google action.

Patent Owner's construction. *Id.* at 19–20. Patent Owner's arguments on the merits again return to attempting to try to introduce requirements on how “grid points” are determined, which are not part of the claim construction. Accordingly, we do not find Patent Owner's arguments on these issues to be persuasive.

At this juncture, we also do not find persuasive Patent Owner's argument that Spain does not show that any grid point is associated with representative calibration data for an area or that Petitioner does not address what it means for calibration data to be “representative.” Prelim. Resp. 46–47. A grid point, which is a respective fingerprint of a set with a location (*see id.*), is associated with calibration data, with calibration data discussed in limitation [1.1] above. The Petition further identifies Spain's disclosure that “the fingerprint corresponds not to one exact spot on the surface of the earth, but instead to a small area.” Pet. 27 (citing Ex. 1006 ¶ 99). At this juncture, we determine that Petitioner has sufficiently demonstrated that Spain discloses grid points associated with representative calibration data for an area.

We also do not find persuasive Patent Owner's argument that Petitioner has conflated calibration points and grid points. Petitioner explains that “[t]he fingerprints of Spain are generated as one or more sets of ‘grid points.’” Prelim. Resp. 24. Spain discloses that fingerprint measurements at predetermined locations are taken and algorithms are used to interpolate fingerprints at locations between the predetermined locations. Ex. 1006 ¶ 101. Petitioner relies on Spain's disclosure that, as part of re-training, new grids are generated to offer the advantages including “offer[ing] a way to interpolate grid points and reconstruct the grid.” Pet.

25–26 (citing Ex. 1006 ¶¶ 54–55) (emphasis omitted). Petitioner asserts that “the two grid points used to interpolate an additional grid point or points and the generated additional grid point or points are collectively a generated ‘set’ of grid points,” that is, “a ‘set’ which includes the two calibrated grid points and the associated interpolated grid points.” *Id.* In other words, Petitioner is asserting that the two fingerprints with locations (calibration points) used for the generation of interpolated grid points, as well as the interpolated points, are part of the grid point set. We do not discern that Petitioner has conflated calibration points with grid points; when two selected calibration points are part of a set with associated interpolated points, these calibration points may also be considered part of the “set of grid points” under the claim construction for “grid point” used in this Decision.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that Spain discloses limitation [1.2].

iv. Limitation [1.3]

Petitioner argues that Spain discloses that a capture fingerprint “is stored in the fingerprint structure” [i.e., network measurement report] that includes characterizing parameters.” Pet. 27 (citing Ex. 1006 ¶ 97, Fig. 9) (emphasis omitted). Petitioner asserts that Spain discloses “the generated fingerprint (in the mobile unit) is transmitted to the location server over the wireless link” (EX1006, [0048] (emphasis added)), which expressly includes signal strengths and the identity of the current serving cell for the mobile unit.” *Id.* at 27–28 (citing Ex. 1006 ¶¶ 44, 48, 57, 66, 82, Fig. 12 (step 1203); Ex. 1008 ¶¶ 85–86).

Patent Owner presents no arguments specifically related to this limitation. *See generally* Prelim. Resp.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that Spain discloses limitation [1.3].

v. Limitation [1.4]

Petitioner asserts that Spain evaluates “fingerprint structures” received from a mobile unit with each of the sets of grid points as a function of the identity of a characterizing parameter. Pet. 29–30. Petitioner identifies the characterizing parameter as the current serving cell, where Spain explains “the number of possible locations of the mobile unit that must be searched can be reduced when an approximate estimate of the mobile unit’s location is available.” *Id.* (citing Ex. 1006 ¶ 66; Ex. 1008 ¶¶ 90–91) (emphasis omitted). Petitioner further relies upon Spain’s disclosure of “Test #1” that “[e]liminates all locations outside the serving area of the cell that is reported as the serving cell.” *Id.* at 31 (citing Ex. 1006 ¶ 82) (emphasis omitted).

Patent Owner presents no arguments specifically related to this limitation. *See generally* Prelim. Resp.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that Spain discloses limitation [1.4].

vi. Limitation [1.5]

Petitioner asserts that Spain discloses selecting grid points, that is, multiple fingerprints, using signal strength as the “predetermined criteria.” Pet. 32 (citing Ex. 1006 ¶ 47; Ex. 1008 ¶ 97) (emphasis omitted).

Patent Owner presents no arguments specifically related to this limitation. *See generally* Prelim. Resp.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that Spain discloses limitation [1.5].

vii. Limitation [1.6]

Petitioner asserts that Spain discloses the selection of grid points as the “closest” by signal strength and interpolating the location as explained by: “the search algorithm takes more than one fingerprint from the database that are closest to the generated fingerprint and interpolates the most plausible location for the MU [mobile unit] from the locations of the chosen fingerprints.” Pet. 33 (citing Ex. 1006 ¶ 47; Ex. 1008 ¶¶ 102–103).

Patent Owner presents no arguments specifically related to this limitation. *See generally* Prelim. Resp.

We have reviewed the evidence and argument, and on this record, we preliminarily determine that Petitioner has presented sufficient evidence that Spain discloses limitation [1.6].

viii. Conclusion

Accordingly, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claim 1 is anticipated by Spain.

b. Claim 32

Claim 32 is a system claim that recites similar limitations to the limitations of method claim 1. Petitioner relies on similar evidence and argument to that presented for claim 1 in support of Spain’s disclosures of the claim 32 limitations. Pet. 35–38.

Patent Owner presents no additional arguments specifically directed to claim 32 that we have not already addressed. *See generally* Prelim. Resp. We have reviewed the Petition’s showing for this claim and find that sufficient evidence has been provided in support of the anticipation challenge at this stage of the proceeding. Accordingly, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claim 32 is anticipated by Spain.

c. Claims 7, 9, 38, and 40

Petitioner provides evidence and argument that dependent claims 7, 9, 38, and 40 are anticipated by Spain. Pet. 34–35, 38. Patent Owner presents no additional arguments specifically directed to these claims that we have not already addressed. *See generally* Prelim. Resp. We have reviewed the Petition’s showing for these claims and find that sufficient evidence has been provided in support of the anticipation challenges at this stage of the proceeding. Accordingly, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that claims 7, 9, 38, and 40 are anticipated by Spain.

D. Obviousness of Claims 1, 7, 9, 32, 38, and 40 By Spain As Evidenced by Agiwal

Petitioner also asserts that claims 1, 7, 9, 32, 38, and 40 would have been obvious over Spain as evidenced by Agiwal. Pet. 22–39. We begin with a brief discussion of Agiwal and then discuss the ground.

1. Agiwal (Ex. 1005)

Agiwal is a paper describing an RF-based system for locating and tracking users in a wireless LAN network called LOCATOR. Ex. 1005, 102. Agiwal’s LOCATOR system “works in two phases. In the first phase, it builds a radio map [database] of the site where the wireless network is

deployed,” where “[t]he radio map [database] is a mapping between the physical locations and the observed signal strength values at these locations from various base stations.” *Id.* at 103. Among other things, the radio map building phase employs a technique of fragmenting the radio map database into location-based clusters to reduce computation cost while answering location search queries. *Id.*; *see also id.* at 104–105.

“In the second phase, LOCATOR uses the radio map to estimate the location of a user, given its current observed signal strength values from various base stations.” Ex. 1005 at 103; *see also id.* at 103–106.

In the location estimation phase, the users periodically query the radio map database with their observed signal strengths (q_1 , q_2 , q_3) from the 3 base stations. To estimate a user’s location, LOCATOR . . . :

1. Performs a k-best search in the 3-dimensional signal space using the previous estimate of the user’s location and (q_1 , q_2 , q_3)
2. Clusters the k points based on their physical closeness
3. For each cluster, estimates the most probable location of the user and its likelihood
4. Chooses the location with the highest likelihood as the current estimate of the user’s location.

Ex. 1005, 105; *see also id.* at 102 (Abstract).

2. Discussion

The above discussion related to anticipation also equally applies to the obviousness challenges presented by Petitioner, which support the reasonable likelihood of Petitioner prevailing in showing that claims 1, 7, 9,

32, 38, and 40 are obvious over Spain. *See Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983).

III. CONCLUSION

For the foregoing reasons, we have determined that there is a reasonable likelihood that the Petitioner would prevail with respect to at least one of the claims challenged in the Petition. We therefore institute trial as to all challenged claims on all grounds stated in the Petition.

IV. ORDER

Upon consideration of the record before us, it is:

ORDERED that *inter partes* review of claims 1, 7, 9, 32, 38, and 40 of the '753 patent is instituted on all grounds in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

IPR2023-01212
Patent 8,406,753 B2

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