

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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T-MOBILE USA, INC., AT&T SERVICES, INC., CELLCO  
PARTNERSHIP d/b/a VERIZON WIRELESS, ERICSSON INC., and  
NOKIA OF AMERICA CORPORATION,  
Petitioner,

v.

HEADWATER PARTNERS II LLC,  
Patent Owner.

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IPR2024-01468  
Patent 9,094,868 B2

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Before ROBERT J. WEINSCHENK, SCOTT B. HOWARD, and  
STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

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

## I. INTRODUCTION

T-Mobile USA, Inc., AT&T Services, Inc., Cellco Partnership d/b/a Verizon Wireless, Ericsson Inc., and Nokia of America Corporation (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–34 of U.S. Patent No. 9,094,868 B2 (Ex. 1001, “the ’868 patent”). Headwater Partners II LLC (“Patent Owner”) filed a Preliminary Response. Paper 10 (“Prelim. Resp.”); Paper 7 (Patent Owner’s Mandatory Notices). Patent Owner also disclaimed claims 1–10 and 16–34 of the ’868 patent, leaving only dependent claims 11–15 (“Challenged Claims”) at issue in this case. Ex. 3001 (Disclaimer, dated Mar. 11, 2025); Prelim. Resp. 1; 37 C.F.R. § 42.107(e) (2024) (“No *inter partes* review will be instituted based on disclaimed claims.”). With our authorization, Petitioner and Patent Owner filed a Pre-Institution Reply and Pre-Institution Sur-reply, respectively, to the Preliminary Response concerning discretionary denial under 35 U.S.C. § 314(a). Papers 11 (“Prelim. Reply”), 14 (“Prelim. Sur-reply”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2024); 37 C.F.R. § 42.4(a). We may not institute an *inter partes* review “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). The “reasonable likelihood” standard is “a higher standard than mere notice pleading” but “lower than the ‘preponderance’ standard to prevail in a final written decision.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential). When instituting *inter partes* review, the Board will authorize the review to proceed on all of the

challenged claims and on all grounds of unpatentability asserted for each claim. 37 C.F.R. § 42.108(a).

Applying those standards, and upon consideration of the information presented in the Petition, Preliminary Response, and supplemental briefing, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one of the Challenged Claims is unpatentable. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Accordingly, we institute an *inter partes* review as to all Challenged Claims of the '868 patent on all relevant grounds raised in the Petition.

## II. BACKGROUND

### A. *Real Parties in Interest*

Petitioner identifies T-Mobile USA, Inc., AT&T Services, Inc., Cellco Partnership d/b/a Verizon Wireless, Ericsson Inc., and Nokia of America Corporation as real parties in interest. Pet. 73 (discussing additional “potential” real parties in interest).

Patent Owner identifies itself as a real party in interest. Paper 7, 1.

### B. *Related Matters*

According to the parties, the '868 patent has been asserted in *Headwater Partners II LLC v. Cellco Partnership*, No. 2:24-cv-00007 (E.D. Tex.); *Headwater Partners II LLC v. T-Mobile USA, Inc.*, No. 2:24-cv-00015 (E.D. Tex.); and *Headwater Partners II LLC v. AT&T Services, Inc.*, No. 2:24-cv-00016 (E.D. Tex.). Pet. 74; Paper 7, 1.

### C. *The '868 Patent*

The '868 patent is titled “User Equipment Link Quality Estimation Based on Positioning,” and issued on July 28, 2015, from U.S. Application No. 14/053,574, filed October 14, 2013. Ex. 1001, codes (10), (21), (22),

(45), (54). The '868 patent claims priority to U.S. Provisional Application No. 61/714,151, filed October 15, 2012. Ex. 1001, code (60).

The '868 patent summarizes its forty-eight columns of disclosure as follows:

Systems, methods, and apparatuses for estimating a user equipment link quality based on a positioning of user equipment are provided. One method includes determining a plurality of link qualities (LQs) of the user equipment (UE) for a plurality of positionings of the UE, wherein at least one of the plurality of positionings includes at least a location or an orientation of the UE, storing information associated with the plurality of LQs for the plurality of positionings, estimating at least one future positioning of the UE, and estimating a future link quality (LQ) of the UE at the at least one future positioning of the UE based on the stored information associated with the plurality of LQs at the plurality of positionings of the UE.

Ex. 1001, code (57); *see* 37 C.F.R. § 1.72 (“The purpose of the abstract is to enable the Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure.”).

*D. Illustrative Claim*

Given Patent Owner’s disclaimer of claim 1–10 and 16–34 (Ex. 3001), the '868 patent now includes only five claims, namely dependent claims 11–15. Claim 11 depends from claim 7, which in turn depends from independent claim 1. Claims 12–15 depend, directly or indirectly, from claim 11. Claims 1, 7, and 11 are reproduced below with labels, such as “1[a],” added to limitations in the same manner as used by the parties.

1. [1[pre]] A method, comprising:

[1[a]] determining a plurality of link qualities (LQs) of a user equipment (UE) for a plurality of positionings of the UE, wherein at least one of the plurality of positionings includes at least a location or an orientation of the UE;

[1[b]] storing information associated with the plurality of LQs for the plurality of positionings;

[1[c]] estimating at least one future positioning of the UE; and

[1[d]] estimating a future link quality (LQ) of the UE at the at least one future positioning of the UE based on the stored information associated with the plurality of LQs at the plurality of positionings of the UE.

7. The method of claim 1, wherein a link quality positioning information includes at least one of the determined plurality of LQs, the stored information, the estimated future positioning or the estimated future LQ.

11. The method of claim 7, further comprising determining a UE environment information, wherein at least a portion of the link quality positioning information is based on the UE environment information.

Ex. 1001, 48:32–43, 48:62–65, 49:12–15.

*E. Evidence of Record*

Petitioner relies on the following published patent application evidence.

| Name     | Patent Document                                                          | Exhibit |
|----------|--------------------------------------------------------------------------|---------|
| Jarvinen | U.S. Patent Appl. Pub. No. 2008/0248822 A1,<br>published October 9, 2008 | 1004    |
| Fox      | U.S. Patent Appl. Pub. No. 2012/0064908 A1,<br>published March 15, 2012  | 1005    |

Pet. 2.

Petitioner also relies upon the Declaration of Stan McClellan, Ph.D. (Ex. 1012).

Patent Owner does not rely on any expert testimony of its own at this stage of the proceeding.

*F. Asserted Challenges to Patentability*

Petitioner challenges the patentability of the Challenged Claims (dependent claims 11–15) on the following basis. Pet. 2.

| Claims Challenged | 35 U.S.C. §      | Reference(s)/Basis |
|-------------------|------------------|--------------------|
| 11–15             | 103 <sup>1</sup> | Jarvinen, Fox      |

III. PATENTABILITY

*A. Applicable Law*

Petitioner challenges the patentability of claims 11–15 of the ’868 patent on the ground that the claims would have been obvious under 35 U.S.C. § 103 in view of the combination of Jarvinen and Fox. “In an [*inter partes* review], the petitioner has the burden from the onset to show *with particularity* why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)) (emphasis added). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A claim is unpatentable under 35 U.S.C. § 103 if “the differences between the subject matter sought to be patented and the prior art are such

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<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the ’868 patent was effectively filed before March 16, 2013, the effective date of the relevant amendment, we preliminarily apply the pre-AIA version of § 103. *See* Ex. 1001, code (60). Neither party argues that the outcome of this case would differ based on applying the pre-AIA or post-AIA versions of these laws.

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 skill in the art; and (4) when of record, objective evidence of obviousness or non-obviousness, i.e., secondary considerations. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). Secondary considerations may include the following: “commercial success, long felt but unsolved needs, failure of others, etc.”<sup>2</sup> *Id.* The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *Id.* at 415. Whether a patent claiming a combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To reach this conclusion, however, “requires more than a mere showing that the prior art includes separate references covering each

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<sup>2</sup> At this stage of the proceeding, Patent Owner has not presented objective evidence of non-obviousness.

separate limitation in a claim under examination.” *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.* “To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

*B. Level of Ordinary Skill in the Art*

Petitioner contends that a person of ordinary skill in the art, at the time of the invention of the ’868 patent:

would have been someone with at least (1) a bachelor’s degree in electrical engineering, computer engineering/science, or a related scientific field, and (2) either (a) a master’s degree in electrical engineering, computer engineering/science, or a related field, or (b) two or more years of work or research experience in wireless networking and/or computing.

Pet. 10 (citing Ex. 1012 ¶ 20).

Patent Owner does not present an alternative definition at this stage of the proceeding. *See* Prelim. Resp. 3 (“For purposes of this Preliminary Response, Patent Owner does not challenge that definition.”).

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are

made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted).

Neither party argues, at least at this stage of the proceeding, that the outcome of this case would differ based on our adoption of any particular definition of the level of ordinary skill in the art. Considering the subject matter of the ’868 patent, the background technical field, the prior art, and Petitioner’s proposed and unopposed definition of the skilled artisan (Ex. 1012 ¶ 20), we apply the level of skill set forth above.

### C. *Claim Construction*

We construe claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *see CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (There is “a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.”). “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). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we need only construe 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))).

Petitioner submits that “all claim terms should be given their plain and ordinary meaning” (Pet. 10–11), and “Patent Owner agrees” (Prelim. Resp. 4). In determining at this stage of the proceeding that Petitioner has demonstrated a reasonable likelihood of establishing unpatentability of at least one challenged claim (namely dependent claim 11 in this case), we need not and do not construe expressly any claim terms.

Nevertheless, we encourage the parties to submit proposed constructions for the limitation “*determining* a UE [i.e., User Equipment] environment information,” as recited in dependent claim 11. *See* Ex. 1001, 49:12–15, 1:40–42 (emphasis added). To the extent that a party proposes that this limitation should have its ordinary and customary meaning, the party should submit and explicitly identify such meaning. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) (“A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate when a term has more than one

‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.”). For example, the parties should discuss (a) the meaning and scope of “determining” as used in the subject limitation; (b) the meaning and scope of “environment information” as used in the subject limitation; (c) any relationship or overlap between “environment information” and “link quality positioning information,” as recited in dependent claims 7 and 11 (*see* Ex. 1001, 48:62–65, 49:12–15); and (d) whether UE “environment information” includes location or orientation of the UE.

*D. Alleged Obviousness of Claims 11–15 over Jarvinen and Fox*

Petitioner contends claims 11–15 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of Jarvinen and Fox. Pet. 17–47, 50–51, 54–56. Patent Owner opposes Petitioner’s contentions. Prelim. Resp. 1–2, 4–8. Based on our review of the record before us, we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 11–15 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of Jarvinen and Fox, as discussed below. We turn first to an overview of Jarvinen (Petitioner does not rely on Fox for the additional limitations in claim 11 (*see* Pet. 54)).

*1. Overview of Jarvinen (Ex. 1004)*

Jarvinen generally is directed to “radio link adaptation in a mobile telecommunication system.” Ex. 1004 ¶ 1. Jarvinen describes:

A method for managing transmission conditions in a mobile telecommunication system according to movement of a mobile terminal is provided. The mobile terminal is having a communication link with a base station. The movement of the mobile terminal is monitored, and then a database is checked for

the most optimal transmission conditions for the monitored movement of the mobile terminal, and action is taken to change the transmission conditions of the communication link upon detecting, in the database, transmission conditions providing a more optimal communication link for the current movement of the mobile terminal than the transmission conditions currently being used for the communication link.

*Id.* at code (57).

Jarvinen's Figure 1, reproduced below, shows "a mobile terminal 100 [that] is currently communicating with a first base station 120."

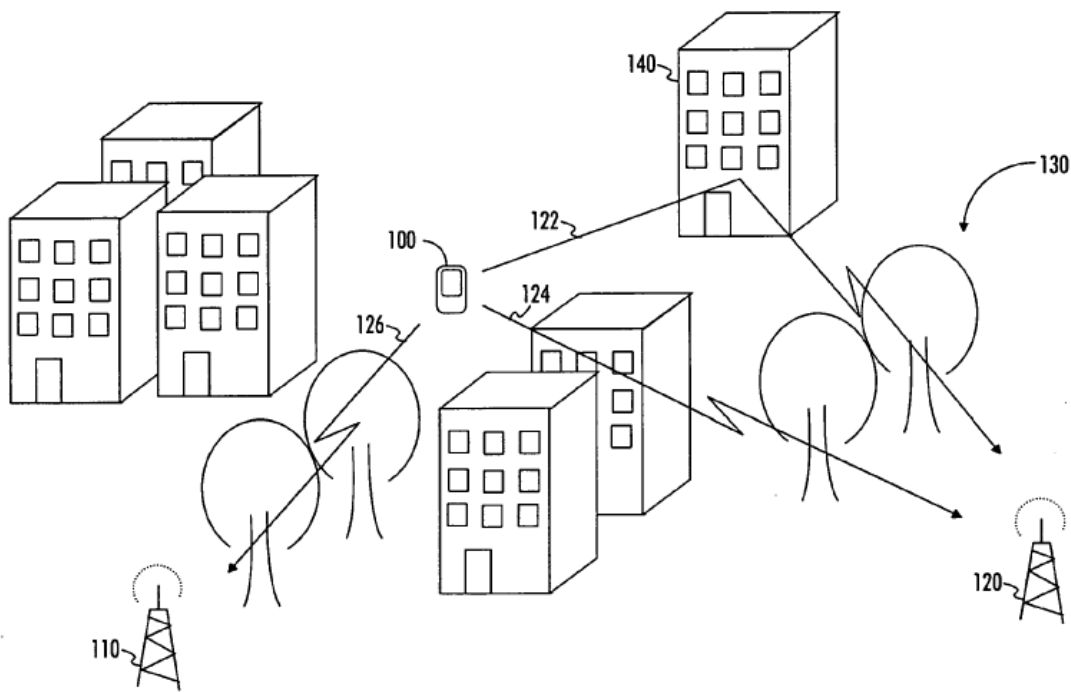


Fig. 1

Figure 1 depicts a typical mobile radio environment.

Ex. 1004 ¶¶ 11, 19, Fig. 1.

Jarvinen discloses a database that stores mobile terminal geographic locations, transmission conditions, and transmission properties, as shown, for example, in Figure 3, reproduced below.

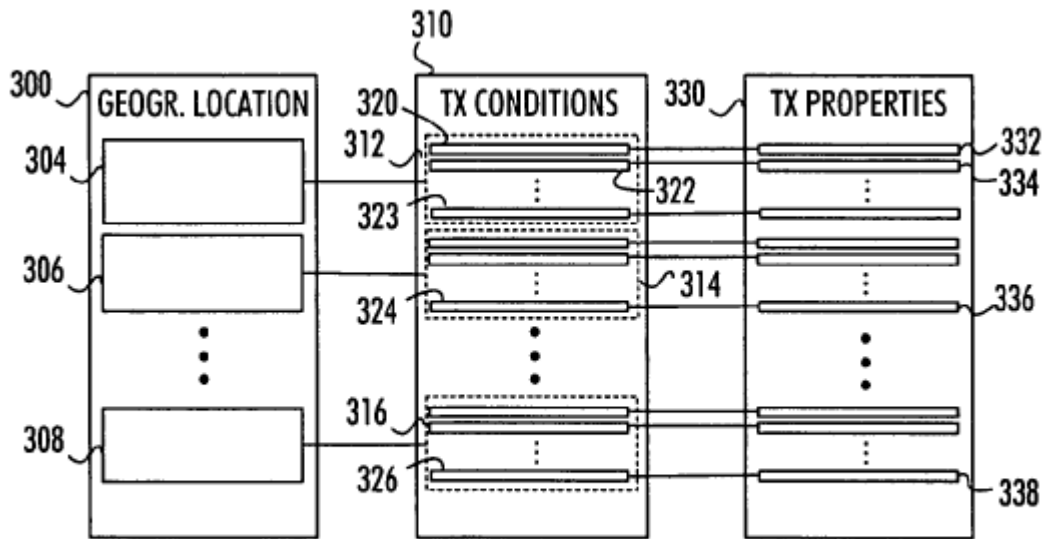


**Fig 3**

Figure 3 depicts a database (a data structure) linking mobile terminal geographic locations, transmission conditions, and transmission properties.

Ex. 1004 ¶¶ 13, 34–35, Fig. 3. More specifically, Jarvinen discloses (1) a base station stores the location of a mobile terminal in first data field 300 in the database to form location value 304 representing the geographical location of the mobile terminal; (2) the base station stores the transmission conditions used in the transmission of a measured signal in second data field 310 of the database to form transmission condition group 320, and links transmission condition group 320 to the geographical location of the mobile terminal stored as location value 304 in first data field 300 of the database; and (3) the base station stores a measured reception level of the signal received from the mobile terminal in third data field 330 of the database to form transmission property value 332 and to link the stored transmission property value to transmission parameter group 320 used in the transmission of the signal in question. *Id.* ¶¶ 34–35.

Jarvinen discloses accommodating a mobile terminal's future transmission needs *before* waiting to measure channel quality at a future terminal position:

When provided with knowledge of data transmission properties (or quality measures of a communication link) obtainable with different transmission conditions from a given geographical location, *one may select appropriate transmission conditions for a mobile terminal* located in the geographical location or arriving shortly at the geographical location with no need to measure properties of the radio channel environment and react to the changing environment. In other words, optimal transmission conditions may be selected *before* a change in the radio channel environment to prevent the degradation of signals.

Ex. 1004 ¶ 31 (emphases added).

We further discuss below the disclosures of Jarvinen in connection with the parties' arguments.

## 2. *Dependent Claim 11*

Claim 11 further defines the method of dependent claim 7 and independent claim 1 to require “*determining a UE environment information*, wherein at least a portion of the link quality positioning information is based on the UE environment information.” Ex. 1001, 49:12–15 (emphasis added). The parties dispute whether the combination of Jarvinen and Fox teaches or at least fairly suggests to the skilled artisan the feature of “determining a UE environment information.” Pet. 17–47, 50–51, 54; Prelim. Resp. 1–2, 4–8.

### a) “*determining a UE environment information*”

Petitioner argues Jarvinen teaches or at least fairly suggests the subject limitation by describing a database that is “updated constantly with new data to adapt the database to changes in the radio environments related

to different geographical locations,” where the “radio environment may have changed due to newly constructed buildings” (Ex. 1004 ¶ 39), and by describing that “[s]everal factors may affect the actual transmission properties with given transmission conditions,” where “[s]uch factors include season of the year, weather, traffic, etc.” (*id.* ¶ 62). Pet. 54 (citing Ex. 1004 ¶¶ 39, 58–59, 62; Ex. 1012 ¶ 96). Jarvinen also describes that “[g]iven transmission property values may be averaged over *the plurality of measurements* to average the different transmission properties associated with different mobile terminals.” Ex. 1004 ¶ 39 (emphasis added). Petitioner persuasively argues that Jarvinen’s above disclosures concerning databasing radio environment information based on various measurements would have taught or at least fairly suggested to the skilled artisan *determining* radio environment information. Patent Owner does not explain specifically how Jarvinen would possess constantly updated radio environment information for its database without determining such information.

We note that dependent claim 11 subsumes dependent claim 7 and independent claim 1, and likewise Petitioner’s arguments concerning features of claim 11 are informed by those concerning claims 7 and 1. We also note that the challenged patent states that “UE environment information” comprises “information associated with a user of the UE” (claim 13), which itself comprises “positioning of the user of the UE or positioning of the user of the UE relative to the UE” (claim 14). Ex. 1001, 49:20–27. Jarvinen’s paragraph 58, cited by Petitioner (Pet. 54), describes that “the mobile terminal may give instructions to turn the backside of the mobile terminal, i.e. the side opposite to a side typically pressed against the

user's head during a phone call, towards the base station,” and paragraph 59 (Pet. 54) describes “detect[ing] a sufficient change in the bearing of the mobile terminal.” Ex. 1004 ¶¶ 58–59. Such disclosures appear to further support Petitioner's argument that Jarvinen would have taught or at least fairly suggested to the skilled artisan determining user equipment environment information, particularly where bearing and orientation of user equipment constitutes “environment information.”

Further, claim 1 itself includes features of “positionings of the UE” that include “at least a location or an orientation of the UE,” which are directly (or indirectly) related to positioning of the user of the UE or bearing thereof, and Petitioner argues Jarvinen teaches or at least fairly suggests such features by describing, for example, “obtain[ing] knowledge of the geographical location of the mobile terminal” (Pet. 23) and that “the mobile terminal is able to determine its bearing” (Pet. 26). *See* Pet. 21–26 (citing, *inter alia*, Ex. 1004 ¶¶ 34, 41, 43, Fig. 4); 50–51 (discussing claim 7 and referring to limitation 1[a] (i.e., Pet. § VIII.A.3)). Petitioner's cited support in Jarvinen discussed above also appears to support its argument that Jarvinen would have taught or at least fairly suggested to the skilled artisan “determining a UE environment information.”

Patent Owner argues that Petitioner proffers merely a “conclusory allegation,” “with no supporting evidence or analysis,” that Jarvinen discloses “determining a UE environment information.” Prelim. Resp. 1–2, 4–8; *see id.* at 5 (“[T]he Petition makes no showing whatsoever that Jarvinen discloses **determining** this UE environment information.”). Patent Owner argues, “as Jarvinen discloses, the information in the constantly-updated database may be influenced in some respect by environmental factors such

as newly-constructed buildings or changing weather, but this does not mean that any method in Jarvinen **determines** that the weather has changed or any buildings have been constructed.” *Id.* at 6. We find Patent Owner’s arguments unavailing.

Patent Owner’s arguments here appear to depend on particular (narrow) constructions of “determining” and “environment information” that Patent Owner has not yet proffered and supported. For at least this reason, as explained above in Section III.C, we encourage the parties to submit proposed constructions for the limitation “determining a UE environment information,” as recited in dependent claim 11.

Based on the record before us, we find Petitioner sufficiently shows that the combination of Jarvinen and Fox would have taught or at least fairly suggested the features of claim 11, namely “determining a UE environment information, wherein at least a portion of the link quality positioning information is based on the UE environment information.”

*b) Remaining Limitations, Reasons to Combine Teachings of Jarvinen and Fox, and Reasonable Expectation of Success*

Apart from the arguments discussed above concerning dependent claim 11, Patent Owner does not present arguments specifically directed to the limitations recited in underlying independent claim 1 or dependent claim 7 (which Patent Owner disclaimed (Ex. 3001)). *See* Prelim. Resp. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. The Petition provides a detailed assessment of these limitations, with references to disclosures in Jarvinen and Fox and the declaration testimony of Petitioner’s expert, Dr. McClellan. Pet. 17–47, 50–51. We have reviewed Petitioner’s

arguments and evidence in this regard (Pet. 17–47, 50–51), and are persuaded that Petitioner sufficiently shows that the combination of Jarvinen and Fox would have taught or at least fairly suggested the features of claims 1 (i.e., limitations 1[pre] through 1[d]) and 7.

Petitioner contends the skilled artisan would have had rational reasons to combine the teachings of Jarvinen and Fox to arrive at the invention of dependent claim 11 (which includes the features of independent claim 1 and dependent claim 7) and would have had a reasonable expectation of success in doing so. Pet. 37–41; *see, e.g., id.* at 38 (“[The skilled artisan] faced with the problem of estimating a UE’s future link quality at a location would have looked to Fox because Fox solves the problem of estimating future link quality with the exact same information available to Jarvinen.”); Ex. 1012 ¶ 70 (Dr. McClellan testifying that “[a]ll of the data upon which Fox relies is already disclosed and linked together in Jarvinen’s database, and it would have been obvious for [the skilled artisan] to combine Fox’s method of looking up previous link quality to estimate future link quality with Jarvinen’s teachings.”); ¶ 72 (Dr. McClellan testifying that “modifying Jarvinen to perform Fox’s link quality estimation would have constituted a simple substitution of a known element to yield predictable results.”). Patent Owner does not dispute such reasons or expectations at this stage of the proceeding. For the reasons and evidence set forth in pages 37–41 of the Petition, we are persuaded that Petitioner’s cited evidence provides sufficient rational reasons for purposes of institution to combine Jarvinen and Fox to arrive at the invention of claim 11, and to do so with a reasonable expectation of success.

*c) Summary*

At this stage of the proceeding and based on the record before us, we are persuaded that Petitioner's cited evidence provides sufficient rational reasons for purposes of institution to combine Jarvinen and Fox with a reasonable expectation of success, and sufficiently supports Petitioner's contention that dependent claim 11 would have been unpatentable as obvious over the combination of Jarvinen and Fox. Thus, for the foregoing reasons and those stated in Petitioner's preliminary briefing (Pet. 17–47, 50–51, 54), we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that claim 11 would have been unpatentable as obvious over the combination of Jarvinen and Fox.

*3. Dependent Claims 12–15*

Claims 12–15 depend directly or indirectly from dependent claim 11. Ex. 1001, 49:16–30. The Petition provides a detailed assessment of these claims, with references to the Petition's analysis of claims 11, 7, or 1, disclosures in Jarvinen, and the declaration testimony of Dr. McClellan. Pet. 54–56. At this stage of the proceeding, Patent Owner does not present any separate arguments that are distinct to these claims. Rather, Patent Owner generally is of the view its alleged deficiencies in the Petition with respect to claim 11 are also applicable to these dependent claims. *See* Prelim. Resp. 1–2, 4. As discussed above, on the present record and at this stage of the proceeding, we are persuaded that the cited evidence sufficiently supports Petitioner's contention that dependent claim 11 is unpatentable as obvious over the combination of Jarvinen and Fox. For the reasons set forth in the Petition (Pet. 54–56), we also are persuaded that the cited evidence sufficiently supports Petitioner's contentions that dependent claims 12–15

are unpatentable as obvious over the combination of Jarvinen and Fox, for purposes of institution.

#### IV. DISCRETIONARY DENIAL – 35 U.S.C. § 314(a)

In its Preliminary Response, Patent Owner initially requested that the Board exercise its discretion under 35 U.S.C. § 314(a) to deny institution in this case. Prelim. Resp. 1–3, 8–19. Subsequently, in supplemental briefing, Patent Owner withdrew this request. Prelim. Sur-reply 1 (“Patent Owner withdraws its request for discretionary denial under *Fintiv*, but maintains its arguments on the merits.”). Accordingly, we need not and do not address discretionary denial under 35 U.S.C. § 314(a) in this case.

#### V. CONCLUSION

Based on the evidence before us, we determine that Petitioner has established a reasonable likelihood that claims 11–15 of the ’868 patent are unpatentable. Accordingly, we institute trial on all relevant challenges in the Petition.

We base our factual findings and conclusions at this stage of the proceeding on the evidentiary record developed so far. This is not a final decision as to the construction of any claim term or the patentability of any claim. Any final decision shall be based on the full trial record, including any response timely filed by Patent Owner. Any arguments not raised by Patent Owner in a timely filed response may be deemed waived, even if they were presented in the Preliminary Response.

#### VI. ORDER

Upon consideration of the record before us, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 11–15 of U.S. Patent No. 9,094,868 B2 is instituted with respect to all relevant grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '868 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2024-01468  
Patent 9,094,868 B2

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