Trials@uspto.gov
571-272-7822

Paper 8
Date: July 3, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MULLEN INDUSTRIES LLC,
Patent Owner.

IPR2023-00148
Patent 11,246,024 B2

Before BARBARA A. PARVIS, JAMES J. MAYBERRY, and STEVEN M. AMUNDSON, A*dministrative Patent Judges.*

MAYBERRY, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Apple Inc. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–44 (the "Challenged Claims") of U.S. Patent No. 11,246,024 B2[1] (Ex. 1008, the "'024 patent"). Paper 1 ("Pet."). Mullen Industries LLC ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp.").

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. To institute an *inter partes* review, we must determine that the information presented in the Petition shows "a reasonable likelihood that the petitioner would prevail with respect to at least [one] of the claims challenged in the petition." 35 U.S.C. § 314(a) (2018). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we institute an *inter partes* review.

B. Real Parties-in-Interest

Petitioner identifies itself, Apple Inc., as the real party-in-interest. Pet. 81. Patent Owner names itself, Mullen Industries LLC, as the real party-in-interest. Paper 3, 1.

C. Related Matters

Pursuant to 37 C.F.R. § 42.8(b)(2), the parties inform us that the '024 patent is involved in the following district court case: *Mullen Industries LLC v. Apple Inc.*, C.A. No. 6:22-cv-00145-ADA (W.D. Tex., filed Feb. 9, 2022). Pet. 73; Paper 3, 1. Petitioner indicates this case was transferred and

[1] Petitioner challenges claims 45–78 of the '024 patent in IPR2023-00149. Pet. 1; *see also* IPR2023-00149, Paper 1 (providing the petition in that proceeding). We issue a decision in IPR2023-00149 concurrent with the present Decision.

assigned Case No. 3:23-cv-00437 (N.D. Cal., filed Jan. 31, 2023). Paper 6, 2. Patent Owner identifies *inter partes* review proceedings for patents related to the '024 patent: IPR2023-00087, IPR2023-00090, IPR2023-00091, IPR2023-00096, IPR2023-00097, IPR2023-00098, IPR2023-00115, IPR2023-00116, IPR2023-00117, and IPR2023-00149. Paper 3, 1–2; Prelim. Resp. 2.

D. The '024 Patent

The '024 patent, titled "Systems and Methods for Locating Cellular Phones and Security Measures for the Same," issued February 8, 2022, from an application filed August 20, 2007. Ex. 1008, codes (54), (45), (22). The '024 patent claims priority ultimately to a provisional application filed March 25, 2002. *Id.* at 1:8–12, code (60). The '024 patent relates to remotely determining a device's location. *Id.* at 1:17–20. More specifically, the patent describes "systems and methods for allowing a user of a cellular phone (e.g., a requesting user or a requester) to locate the position of a different user's cellular phone (e.g., a requested user) based upon requestor-assigned access rights." *Id.* at 1:39–43.

According to the '024 patent, a process initiates when a user requests the location of another user's cell phone, and then the process evaluates if the user initiating the location request has the rights to access the location of the desired user. Ex. 1008, 4:54–57. If no access rights for the requesting user have been granted, the process informs the requesting user that the user has not been given access to the requested location. *Id.* at 4:57–60. But if access has been given by a particular user that allows for the requesting user to locate that particular user, the allowed location information is provided,

though the process may filter the information and only provide a portion of the available information. *Id.* at 4:66–5:4.

In addition to keeping track of granting rights for showing location information, the invention describes a user logging into a mobile device with a user id and password, for additional security. Ex. 1008, 9:53–55.

An example of a screen displaying location information is shown in Figure 6, reproduced below.

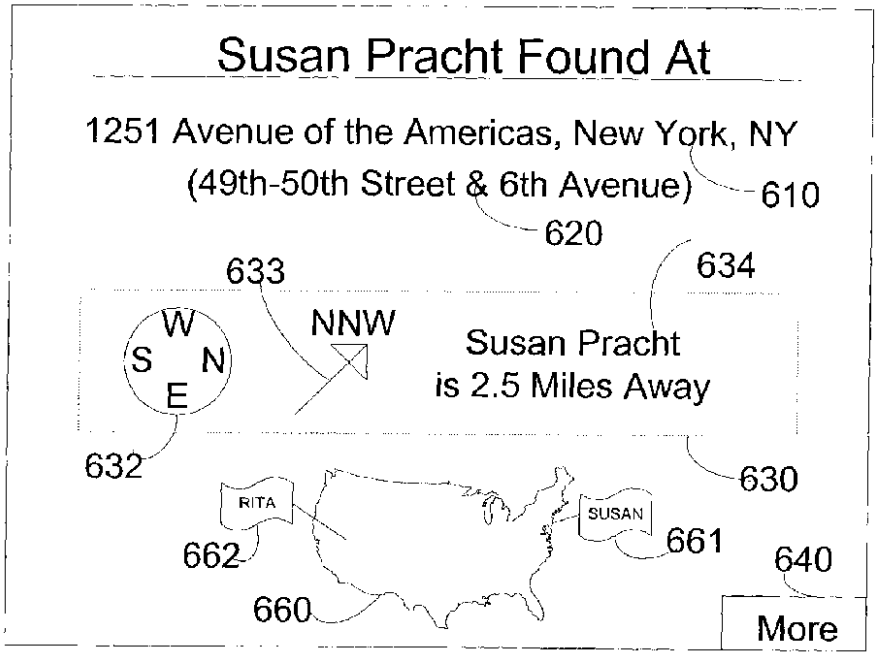


Figure 6, showing primary location information 610, as well as supplemental information, such as directional information 630, distance information 634, map 660, and the location of other users Rita and Susan, at 661 and 662. *See* Ex. 1008, 7:31–8:56 (describing Figure 6).

E. Illustrative Claims

Petitioner challenges claims 1–44 of the '024 patent in this Petition. Pet. 1. Claims 1 and 24 are independent, and are reproduced below.

1. A system comprising:

a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of:

obtaining a location of a first wireless telephone;

changing, at the direction of said first wireless telephone, a list of users for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones;

transmitting said location to at least one of said users of said list of users over said communications network;

determining a second location associated with one of said plurality of wireless telephones; and

providing directional information to said one of said plurality of wireless telephones, wherein said directional information is representative of directions between said second location and said location.

Ex. 1008, 13:16–34.

24. A system comprising:

a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of:

receiving from a first wireless telephone over said communications network a selection of one of a plurality of users, said selection corresponding to a user of said first wireless telephone manually selecting said one of said plurality of users from a display of said first wireless telephone, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones;

receiving from said first wireless telephone information indicative of a login and a password;

determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, wherein said determining includes identifying said user of said first

> wireless telephone using said information indicative of said login and password and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephone;
>
> determining whether said user of said first wireless telephone has assigned location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining a location of said first wireless telephone; and
>
> transmitting over said communications network said location information to said first wireless telephone.

Id. at 14:52–15:16.

F. Prior Art and Asserted Grounds

Petitioner relies on the patent document references summarized in the table below. At this stage of the proceeding, Patent Owner does not challenge the prior art status of any of these references.

Name	Patent Document	Exhibit
Enzmann	US 7,130,630 B1, issued Oct. 31, 2006, from an application filed Dec. 19, 2000	1040
Sheha	US 7,333,820 B2, issued Feb. 19, 2008, from an application filed July 11, 2002[2]	1041
Bechtolsheim	US 6,208,934 B1, issued Mar. 27, 2001	1043
Degnbol	WO 00/22860 A1, published Apr. 20, 2000	1047
Ganesh	US 7,013,148, B1 issued Mar. 14, 2006, from an application filed Dec. 21, 2001	1049
Obradovich	US 6,133,853, issued Oct. 17, 2000	1055

[2] Sheha claims priority to a provisional application filed July 17, 2001. Ex. 1041, code (60); *see also* Ex. 1042 (providing the provisional application).

Petitioner asserts that the Challenged Claims are unpatentable on the following grounds:

Ground	Claims Challenged	35 U.S.C. §[3]	Reference(s)/Basis
1	1–44	103(a)	Sheha, Obradovich, Degnbol, Ganesh, Bechtolsheim
2	1–44	103(a)	Enzmann, Obradovich, Degnbol, Ganesh, Bechtolsheim

Pet. 3.

Petitioner also relies on the declaration testimony of David H. Williams. *See* Ex. 1021 (providing the Declaration[4]).

The following subsections provide brief descriptions of the asserted prior art references.

1. Sheha

Sheha, titled "System and Method for Providing Routing, Mapping, and Relative Position Information to Users of a Communication Network," issued February 19, 2008, from an application filed July 11, 2002. Ex. 1041, codes (54), (45), (22). Sheha claims priority to a provisional application

[3] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2011. The changes to 35 U.S.C. §§ 102 and 103 in the AIA do not apply to any patent application filed before March 16, 2013. Because the '024 patent issued from an application filed before March 16, 2013, we refer to the pre-AIA version of the statute.

[4] Mr. Williams's Declaration is organized into a main section (which Petitioner references as Exhibit 1021) and Appendixes dedicated to each of the patents challenged in the related *inter partes* review proceedings. The '024 patent is addressed in Appendix 8 and Petitioner references that portion of the Declaration as Exhibit 1021-8.

filed July 17, 2001.[5] *Id.* at code (60); *see also* Ex. 1042 (providing the provisional application). Sheha allows a caller and a receiver of a telephone call to provide to, and receive from, each other position information of the caller and/or receiver's physical location, including each address. Ex. 1041, code (57). Sheha addresses a need for

> a system that determines local and/or remote position information which does not require an extensive collection of DVD or CD-ROM discs, which is able to provide location and destination address or position information given a telephone number, and which is up-to-date and reliable and can be accessed via a networked online server(s).

Id. at 2:43–49.

Sheha discloses a computer, called an online database and application server ("ODAS"), which stores telephone and address information. Ex. 1041, 7:51–55. Each calling and receiving user must login to ODAS. *Id.* at 8:40–46. Subsequently, the ODAS provides the address information, so it can be displayed to a user. *Id.* at 7:55–57. In a wireless-to-wireless device call, each device provides its location to the ODAS, which can then provide the information to the other user, based on privacy setting or a group database. *Id.* at 11:3–26, 11:63–12:7.

2. Enzmann

Enzmann, titled "Location Query Service for Wireless Networks," issued October 31, 2006, from an application filed December 19, 2000. Ex. 1040, codes (54), (45), (22). Enzmann seeks to provide location information, based on the enhanced wireless 911 service network's capabilities. *Id.* at 1:11–45. Enzmann describes a "location system 120,"

[5] At this stage of the proceeding, Patent Owner does not dispute that Sheha is entitled to priority of the provisional application filed July 17, 2001.

within a communications network, which provides location information, such as position coordinates, for a handheld device, which it secures from wireless network services. *Id.* at 4:24–38. A user submits a location query to a server, which query may include a password. *Id.* at 6:41–48. The location server 100 determines if the requestor is authorized, and if the user about whom the information is requested has permitted it, then seeks location information about the device from the wireless network, and returns it to the requesting user. *Id.* at 7:12–8:67.

Figure 1, reproduced below, shows a diagram of the Enzmann system of one embodiment.

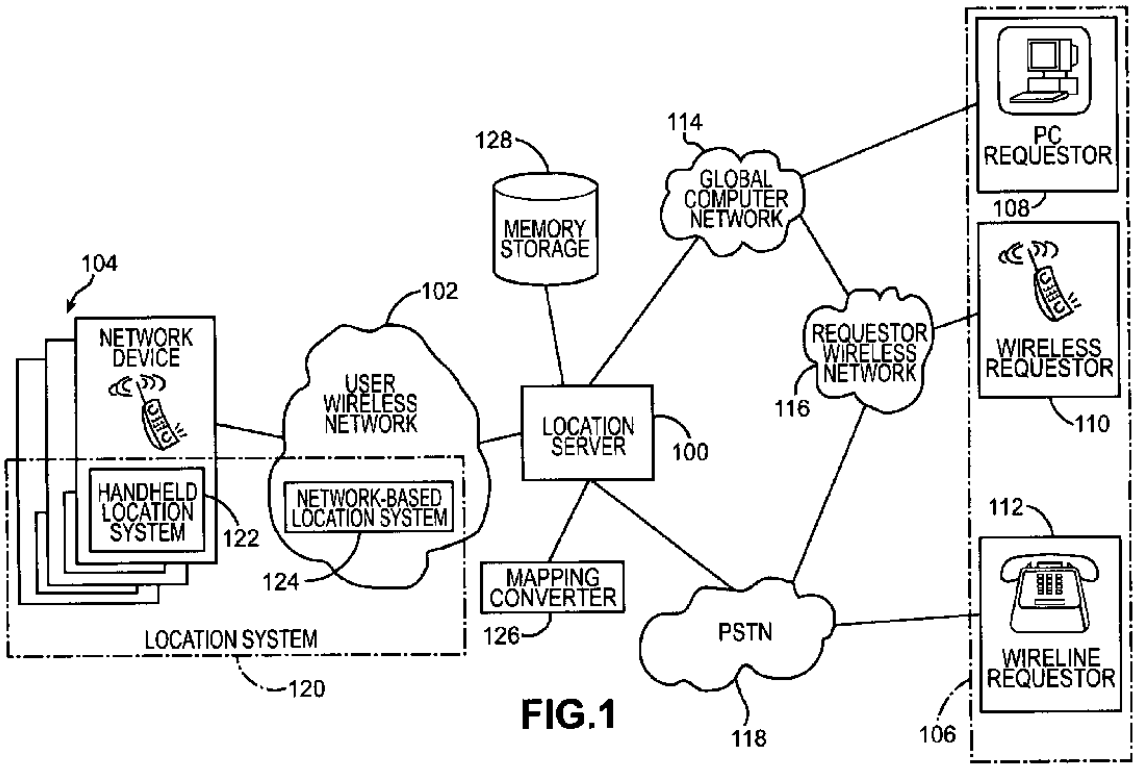


FIG.1

Figure 1 shows location server 100, location system 120, user network devices 104, and requestors 108 and 110. Ex. 1040, 3:53–4:4.

3. Obradovich

Obradovich, titled "Personal Communication and Positioning System," issued October 17, 2000, from an application filed July 30, 1998. Ex. 1055, codes (54), (45), (22). Obradovich relates to a device and system for communicating and retrieving position and position-related data. *Id.* at 1:13–17. Obradovich "utilizes Personal Communications Devices (PCDs), and traditional computer systems with GPS engines, routers, and other application programs to request, process, and transmit tagged GPS encoded information." *Id.* at 2:18–23.

Obradovich describes a home site computer system that maintains the geographic location of the user. Ex. 1055, 26:21–23. The stored geographic location information is linked to a security level index, such as a number between one and ten. *Id.* at 26:28–31. The user also assigns security levels to other users. *Id.* at 26:32–36. When another user contacts the home site computer system, the other user provides an identifier and a password. *Id.* at 26:38–43. Based on the identity of the other user, the home site determines the other user's security level index. *Id.* at 26:43–45. The system uses the other user's security level index and the security level index of the stored information to determine if the other user is able to obtain the stored information. *Id.* at 26:46–49.

4. Degnbol

Degnbol is titled "A Method and a System for Transmitting Data Between Units." Ex. 1047, code (54). Degnbol relates to a method and a system for automatic notification of a user A of the entry of pre-selected user B into a pre-determined area (or proximity to a particular location). *Id.*

at 9.[6] Each of user A and user B carries a communications device such as a data-enabled cellular phone or a pager, the position of which is known to a wireless network. *Id.* at 9, 20. The location of user B is determined by reference to the position of the communications device. *Id.* at 9.

Degnbol describes a "Buddy List," which is a list of other users whose location and/or movements the user wishes to be notified of. Ex. 1047, 9. Preferences for each user "can be configured on an individual Buddy basis or as overall preferences comprising all Buddies on the personal Buddy List." *Id.* at 10. Degnbol describes that preferences can be configured directly from the handset of the user's cellular phone. *Id.* at 11.

5. Ganesh

Ganesh, titled "Method for Providing a Current Location of a Wireless Communication Device," issued March 14, 2006, from an application filed December 21, 2001. Ex. 1049, codes (54), (45), (22). Ganesh relates to using "Automatic Location Identification (ALI) technologies to determine a current location of [a] wireless device," particularly with "safeguards in place to prevent unauthorized individuals from receiving the current location information." *Id.* at 2:49–60. In an embodiment, Ganesh provides an access denial web page explaining why access to a location was denied for a requesting party. *Id.* at 6:33–39.

6. Bechtolsheim

Bechtolsheim, titled "Method and System for Providing Walking Instructions with Route Guidance in a Navigation Program," issued

[6] For Exhibit 1047 (Degnbol), we cite to the page numbers that appear in the publication rather than the page numbers that Petitioner applied to the exhibit.

March 27, 2001, from an application filed January 19, 1999. Ex. 1043, codes (54), (45), (22). Relevant to this proceeding, Bechtolsheim discloses "a system and method that provide an end user of a navigation program with information about walking to a desired destination in combination with information about driving to or close to the desired destination." *Id.* at 1:54–57; *see, e.g.*, *id.* at 15:23–55 (describing how walking directions are provided to a user), 21:26-59 (describing considering public transportation in calculating routes between points).

II. ANALYSIS

A. Legal Standards

Section 103(a) forbids issuance of a patent when "the differences between the subject matter sought to be patented 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 available, evidence such as commercial success, long felt but unsolved needs, and failure of others.[7] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR*, 550 U.S. at 407 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry

[7] The parties do not direct us to any objective evidence of non-obviousness at this stage of the proceeding.

that controls."). The Court in *Graham* explained that these factual inquiries promote "uniformity and definiteness," for "[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context." 383 U.S. at 18.

The Supreme Court made clear that we apply "an expansive and flexible approach" to the question of obviousness. *KSR*, 550 U.S. at 415. Whether a patent claiming the 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 support this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires 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.*

"Additionally, 'universal' motivations known in a particular field to improve technology provide 'a motivation to combine prior art references even absent any hint of suggestion in the references themselves.'" *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023). "And if there's a known technique to address a known problem using 'prior art elements according to their established functions,' then there is a motivation to combine." *Id.*

"[O]bviousness must be determined in light of *all the facts*, and . . . a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine" teachings from

multiple references. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (emphasis added); *see also PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) ("The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact."). As a factfinder, we also must be aware "of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR*, 550 U.S. at 421.

"The 'reasonable likelihood' standard is a somewhat flexible standard that allows the Board room to exercise judgment." Patent Trial and Appeal Board Consolidated Trial Practice Guide 53 (Nov. 2019), *available at* https://www.uspto.gov/TrialPracticeGuideConsolidated.

B. Level of Ordinary Skill in the Art

The level of skill in the art is "a prism or lens" through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). "This reference point prevents . . . factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness." *Id.* Factors pertinent to a determination of the level of ordinary skill in the art include: (1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of workers active in the field. *Env't Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–97 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to

determining the level of ordinary skill in the art. *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). In determining a level of ordinary skill, we also may look to the prior art, which may reflect an appropriate skill level. *Okajima*, 261 F.3d at 1355.

Petitioner contends that a person of ordinary skill in the art the time of the invention

> would have had at least a bachelor of science degree in computer science, computer engineering, electrical engineering, or a similar degree with one or two years of experience with wireless networks and devices, such as cell phones and personal digital assistants as well as wireless positioning technologies such as GPS or triangulation.

Pet. 6–7 (referencing Ex. 1021 ¶ 43). Petitioner also asserts "[a]dditional practical experience would substitute for lack of a formal degree." *Id.* at 7 (referencing Ex. 1021 ¶ 44).

At this time, Patent Owner does not address the level of ordinary skill in the art.

On the current record, we find Petitioner's proposal is consistent with the level of skill reflected in the '024 patent specification and the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). We adopt Petitioner's proposal for the purposes of this Decision.

C. Claim Construction

We construe the Challenged Claims by applying "the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b)," which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc); 37 C.F.R. § 42.100(b) (2022). Under this standard, the words of a claim generally are given their "ordinary and customary meaning," which is the meaning the term would

have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips*, 415 F.3d at 1312–13.

Petitioner asserts that "no term need be construed for the purposes of this" *inter partes* review proceeding. Pet. 7. Patent Owner does not address claim construction at this stage of the proceeding.

Based on the record before us, we determine that we do not need to construe explicitly any claim term to resolve the parties' disputes at this stage of the proceeding. *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)). To the extent that the scope of any particular claim term requires discussion, however, we provide the discussion in our assessment of the challenges.

D. Ground 1: Claims 1–44 as Unpatentable Under 35 U.S.C. § 103(a) over Sheha, Obradovich, Degnbol, Ganesh, and Bechtolsheim

Petitioner contends that claims 1–44 are unpatentable over the combined teachings of Sheha, Obradovich, Degnbol, Ganesh, and Bechtolsheim. Pet. 4, 14–15, 16–48. We analyze below the scope and content of the prior art and any differences between the prior art and the claimed invention of claims 1 and 24, on a limitation by limitation basis.

1. Independent Claim 1

We address Petitioner's contentions with respect to claim 1, and any counter arguments from Patent Owner, consistent with how Petitioner has parsed the limitations of claim 1. *See, e.g.*, Pet. 83–88 (providing

Appendix A to the Petition, which includes the language of the claims, including how Petitioner has identified limitations of the claims).

a) Limitation 1(a)

Claim 1 recites "a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network and further capable of: obtaining a location of a first wireless telephone." Ex. 1008, 13:17–20 (limitation "1(a)"). Petitioner contends that Sheha teaches the subject matter of limitation 1(a). Pet. 17–18 (referencing Ex. 1041, 10:66–11:3, 11:20–26, 11:32–35, Fig. 3; Ex. 1021-8 ¶¶ 19–22).

Petitioner contends that "Sheha's system provides 'real-time position information of one party to another party by utilizing a conventional telecommunication network system such as the convention telephone network, a mobile telecommunications network, a computer network, or the Internet.'" Pet. 17 (quoting Ex. 1041, code (56), and referencing Ex. 1021-8 ¶ 19). Petitioner also reproduces Sheha's Figure 3 and indicates that "[t]he mobile devices [of Figure 3, items 18b and 18c] can be cellular telephones communicating with the ODAS 'through the wireless connection 20b into the wireless network 22, and through the dedicated server connection.'" *Id.* at 17–18 (referencing Ex. 1041, 10:66–11:3, 11:23–26; Ex. 1021-8 ¶¶ 20–21).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 1(a). Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

b) Limitation 1(b)

Claim 1 also recites that the remote system is capable of "changing, at the direction of said first wireless telephone, a list of users for a profile associated with said first wireless telephone that are allowed to access said location, wherein each user of said list of users is representative of one of a plurality of wireless telephones." Ex. 1008, 13:21–26 (limitation "1(b)"). Petitioner contends that Sheha teaches "a 'profile associated with said first wireless telephone' in the form of a 'caller user group' which 'consist[s] of a plurality of group members pre-defined by said caller, each group member of the caller user group being a user of the telecommunication network,' i.e., associated with a wireless telephone." Pet. 18 (referencing Ex. 1041, 5:38–46, 11:61–12:7, 13:57–14:16 (providing claim 1); Ex. 1021-8 ¶¶ 23–25). Petitioner adds that "Sheha states 'users can define a group of specific users that have access to this information . . . utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information.'" *Id.* (referencing Ex. 1041, 11:61–12:1; Ex. 1021-8 ¶ 24). Petitioner explains that, although this disclosure in Sheha is directed to a landline-to-landline position request, Sheha teaches that it may be applied to a mobile-to-mobile position scenario. *Id.* at 18–19 (referencing Ex. 1041, 12:4–7).

Petitioner also contends that "Sheha discloses each identified user is representative of one of a plurality of wireless telephones, referencing a list of 'users' and 'calling devices' interchangeably." Pet. 19 (referencing Ex. 1041, 5:38–46, 11:63–12:4, 13:57–14:16; Ex. 1021-8 ¶ 25). Petitioner contends that Sheha's system changes a list of authorized users based on

directions from the device. *Id.* (referencing Ex. 1041, 5:12–20, 5:33–38; Ex. 1021-8 ¶¶ 25–27).

Patent Owner argues that Sheha fails to disclose this limitation. Prelim. Resp. 22–31. We have considered Patent Owner's arguments and determine, on the current record, that they do not demonstrate a deficiency in Petitioner's position at this stage of the proceeding, for the reasons discussed below.

First, Patent Owner argues that "[t]he system described in Sheha does not involve a device having 'a list of users on said remote server for a profile associated with' that device." Prelim. Resp. 22. But Petitioner directs us to Sheha's disclosure of a caller user group, which Petitioner contends corresponds to the recited list of users. *See* Pet. 18–19. Petitioner has made an adequate showing, at this stage of the proceeding, that Sheha teaches that a user can define group members of the caller user group that may access the user's location. *See, e.g.*, Ex. 1041, 11:62–12:7 (disclosing that "users can define a group of specific users that have access to . . . information," and that "a user can request the position of a mobile device, similarly to requesting the position of a landline device") (referenced at Pet. 18).

Next, Patent Owner argues that Petitioner's reliance on the "caller user group" disclosure is improper, as it "conflate[s] disparate Sheha embodiments." Prelim. Resp. 25. We determine, on the current record, that Petitioner's reliance on these disclosures is proper, as they convey the capabilities of Sheha's remote server. Consistent with the claim language, Petitioner directs us to teachings in Sheha that sufficiently support, at this stage of the proceeding, that Sheha's remote system is *capable of* including a list of users for a profile associated with a first wireless telephone that are

allowed to access the location of that telephone as required by limitation 1(b).

Patent Owner also argues that Petitioner fails to demonstrate that Sheha discloses changing the list of users at the direction of the first wireless telephone, where each user in the list of users is representative of one of a plurality of wireless telephones. Prelim. Resp. 25–30. As Patent Owner recognizes, however, Petitioner relies, in part, on the description of the method recited in claim 1 of Sheha. *See* Pet. 18–19. Claim 1 includes the step of "accessing caller privacy information, said caller privacy information identifying a caller user group consisting of a plurality of group members pre-defined by said caller, each group member of the caller user group being a user of the telecommunication network" and "transmitting to the receiver the caller position information if the receiver is verified to be a member of the caller user group." Ex. 1041, 13:65–14:2, 14:11–13. We determine, on the current record, that these recitations, read in conjunction with other identified sections of Sheha, sufficiently demonstrate, at this stage of the proceeding, that Sheha's remote system is capable of the subject matter of limitation 1(b). *See also* Pet. 18–19 (relying, additionally, on Ex. 1041, 5:12–20, 5:33–38, 5:38–46, 11:63–12:4). We understand Petitioner to contend that, by disclosing that Sheha includes a user group database in which users can define user groups, those groups are capable of being changed—the very nature of a database. *See also* Ex. 1021-8 ¶ 26 ("[B]ecause Sheha discloses that the user of a first wireless telephone has the authority to 'define' a list of users who are allowed to access their location, and further discloses that the user may change these privacy settings to 'enable position transfer permissions at anytime and for any period of time,'

it is my opinion that Sheha discloses that the list may be changed at the direction of the first wireless telephone.").

Next, Patent Owner argues that Petitioner's reliance on Sheha at column 5, lines 12–20 and 33–38, is misplaced, as "at most," this disclosure describes a target device turning its position transfer settings on and off. Prelim. Resp. 29–30; *see* Pet. 19 (referencing Ex. 1041, 5:12–20, 5:33–38, along with Ex. 1021-8 ¶¶ 25–27). As an initial point, Sheha expressly states that these actions can be taken by the calling or receiving phone. *See* Ex. 1041, 5:11–14. Also, we understand that Petitioner relies on this disclosure to demonstrate that a user can use their telephone to change settings for the system, supporting Petitioner's position that Sheha teaches or suggests that its remote system is *capable of* being changed by a user using their telephone. *Cf.* Ex. 1008, 13:17–26 (requiring the remote system to be *capable of* performing the actions recited in limitation 1(b)).

Patent Owner also criticizes Mr. Williams's declaration as "largely mirror[ing] what the Petitioner argues" and being "of little value." Prelim. Resp. 30 (citing *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 12 (PTAB Feb. 10, 2023)). On the current record, we do not agree with Patent Owner's criticism. We note that Mr. Williams does identify evidence in the record to support at least some of his opinions. *See, e.g.*, Ex. 1021-8 ¶ 26 (identifying disclosure in Sheha to support his opinion).

Upon review of the information in the Petition and corresponding evidence, and Patent Owner's counter arguments, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 1(b).

c) Limitation 1(c)

Claim 1 also recites the remote system capable of "transmitting said location to at least one of said users of said list of users over said communications network." Ex. 1008, 13:27–28 (limitation "1(c)"). Petitioner contends that "Sheha states '[w]hen a mobile device's position information is requested, the system, based on privacy settings, responds with the appropriate position information to the requesting user's device.'" Pet. 19 (quoting Ex. 1041, 12:1–7). Petitioner adds that "[t]he ODAS communicates with mobile device 'through the wireless connection 20b into the wireless network 22, and through the dedicated server connection.'" *Id.* (quoting Ex. 1041, 11:23–26; and referencing Ex. 1021-8 ¶ 28).

Patent Owner argues that "[t]o the extent Sheha does not disclose 'a list of users for a profile associated with said first wireless telephone," Sheha does not to teach this 'transmitting' limitation." Prelim. Resp. 31. For the reasons discussed above in our analysis of limitation 1(b), we determine, on the current record, that Petitioner sufficiently demonstrates that Sheha teaches a list of users for a profile associated with the first wireless telephone.

Accordingly, upon review of the information in the Petition and corresponding evidence, and Patent Owner's counter arguments, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 1(c).

d) Limitation 1(d)

Claim 1 also recites a remote system capable of "determining a second location associated with one of said plurality of wireless telephones." Ex. 1008, 13:29–30 (limitation "1(d)"). Petitioner contends that "Sheha

discloses obtaining position information for both a requesting mobile device and a target mobile device." Pet. 19 (referencing Ex. 1041, 4:22–26, 5:47–63, 7:35–39, 9:23–39, Fig. 5; Ex. 1021-8 ¶¶ 30–31). Petitioner adds that Sheha's "ODAS 3 requests position information from the destination mobile device 18 c," and "can provide any number of locations to any number of devices." *Id.* at 19–20 (referencing Ex. 1041, 11:32–33; Ex. 1021-8 ¶ 30).

Mr. Williams testifies that "Sheha's system is able to determine locations of multiple devices," relying on Sheha's disclosure that its system obtains "position information for a requesting mobile device and a target mobile device." Ex. 1021-8 ¶ 30 (relying on Ex. 1041, 4:22–26, 5:47–63, 7:35–39, 9:23–39, Fig. 5 (labels 33–34).

Patent Owner again argues that the subject matter of this limitation is not met because Sheha fails to "disclose 'a list of users' for 'a profile associated with' the first wireless telephone and which consists of users 'that are allowed to access' the location of the first wireless telephone." Prelim. Resp. 32. For the reasons above discussed in our analysis of limitation 1(b), we determine, on the current record, that Petitioner sufficiently demonstrates that Sheha teaches a list of users for a profile associated with the first wireless telephone.

Accordingly, upon review of the information in the Petition and corresponding evidence, and Patent Owner's counter arguments, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 1(d).

e) Limitation 1(e)

Claim 1 also recites a remote server capable of "providing directional information to said one of said plurality of wireless telephones, wherein said

directional information is representative of directions between said second location and said location." Ex. 1008, 13:31–34 (limitation "1(e)"). Petitioner contends that "Sheha discloses requesting a mobile device's location 'to obtain driving directions to that device,' and if both wireless telephones grant access to their respective position information, this 'can be used for real-time driving directions or collaboration purposes.'" Pet. 20 (referencing Ex. 1041, 5:21–26; 5:32–34; Ex. 1021-8 ¶ 32). Petitioner adds that "Sheha discloses the server can calculate and provide this directional information." *Id.* (referencing Ex. 1041, 12:32–37; Ex. 1021-8 ¶ 32).

Petitioner explains that "Sheha's system 'periodically updates each mobile device with the other's position information, thus providing real-time driving directions and route information," and "can 'provide driving direction distance information for the optimal route based on criteria such as time-of-day turn restrictions and highway or surface street preferred usage.'" Pet. 20 (referencing Ex. 1041, 5:2–9, 9:34–39, 11:49–51, 14:17–25 (providing claim 2), 15:25–35 (providing claim 14), 16:53–55 (providing claim 29), Fig. 5; Ex. 1021-8 ¶ 33).

Patent Owner again argues that the subject matter of this limitation is not met because Sheha fails to "disclose 'a list of users' for 'a profile associated with' the first wireless telephone and which consists of users 'that are allowed to access' the location of the first wireless telephone." Prelim. Resp. 33. For the reasons above discussed in our analysis of limitation 1(b), we determine, on the current record, that Petitioner sufficiently demonstrates that Sheha teaches a list of users for a profile associated with the first wireless telephone.

Accordingly, upon review of the information in the Petition and corresponding evidence, and Patent Owner's counter arguments, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 1(e).

f) Preliminary Conclusion as to Claim 1

Having reviewed the preliminary record, including Petitioner's showing as to how Sheha teaches or suggests each of the limitations of claim 1, we determine that Petitioner demonstrates a reasonable likelihood that independent claim 1 is unpatentable under 35 U.S.C. § 103(a) over Sheha, Obradovich, Degnbol, Ganesh, and Bechtolsheim.

2. Dependent Claims 2–23

As we discuss above, Petitioner has demonstrated a reasonable likelihood of success in proving that at least claim 1 of the '024 patent is unpatentable, and we institute on all challenges raised in the Petition. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60 (2018); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (interpreting the statute to require "a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition"); 37 C.F.R. § 42.108(a) ("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.").

We have, however, reviewed Petitioner's contentions and citations to the evidence, including reasons for combining the teachings of Obradovich, Degnbol, Ganesh, and Bechtolsheim with Sheha, and determine that Petitioner has made a sufficient showing, on the current record, that dependent claims 2–23, which depend ultimately from independent

claim 1, are unpatentable under 35 U.S.C. § 103(a) over Sheha, Obradovich, Degnbol, Ganesh, and Bechtolsheim.

Patent Owner does not make any arguments directed to these dependent claims, except for the arguments directed to independent claim 1, which we address above in connection with our analysis of claim 1 under Ground 1.

3. Independent Claim 24

We address Petitioner's contentions with respect to claim 24, and any counter arguments from Patent Owner, on a limitation-by-limitation basis. We address these limitations consistent with how Petitioner has parsed the limitations of claim 24. *See, e.g.*, Pet. 83–88 (providing Appendix A to the Petition, which includes the language of the claims, including how Petitioner has identified limitations of the claim).

a) Limitation 24(a)

Independent claim 24 recites "a remote system comprising a server, the remote system capable of communicating with wireless telephones over a communications network." Ex. 1008, 14:53–55 (limitation "24(a)"). Petitioner contends that Sheha's system includes an application server, the ODAS, and "provides 'real-time position information of one party to another party by utilizing a conventional telecommunication network system.'" Pet. 37 (referencing Ex. 1041, code (56), 11:3–8, 11:44–51, Figure 3; Ex. 1021-8 ¶ 104); *see id.* at 38 (reproducing Sheha's Figure 3). Petitioner explains that "'[t]he mobile devices shown in Figure 3 can be cellular telephones communicating with the ODAS 'through the wireless connection 20 b into the wireless network 22, and through the dedicated server connection 17.'"

Id. at 38 (referencing Ex. 1041, 10:66–11:3, 11:23–26; 11:32–35; Ex. 1021-8 ¶¶ 105–106).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 24(a). Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

b) Limitation 24(b)

Claim 24 recites that the remote system is capable of:

> receiving from a first wireless telephone over said communications network a selection of one of a plurality of users, said selection corresponding to a user of said first wireless telephone manually selecting said one of said plurality of users from a display of said first wireless telephone, wherein each one of said plurality of users is associated to a different one of a plurality of wireless telephones.

Ex. 1008, 14:56–63 (limitation "24(b)"). Petitioner contends that "[i]t was well-known when Sheha was filed users could view lists of contacts stored by their wireless devices and manually select a contact." Pet. 38 (referencing Ex. 1021-8 ¶ 109); *see also id.* (referencing Ex. 1041, 2:64–3:3, 19:47–20:21 (providing claim 54); Ex. 1021-8 ¶¶ 108–109). Petitioner contends that Obradovich's DIRECTORY function provides an alphabetic listing of phone numbers stored on a mobile device. *Id.* at 39 (referencing Ex. 1055, 14:8–15). Petitioner contends that a person having ordinary skill in the art "would have known Sheha's mobile had such capability and been motivated to include such functionality in Sheha's system to improve the user interface and ease of selecting a user to locate, and had a reasonable expectation of success." *Id.* (referencing Ex. 1021-8 ¶¶ 110–111).

Petitioner also contends that a person having ordinary skill in the art would have looked to the "routine and conventional functionalit[y]" disclosed in Obradovich "to facilitate user interaction with devices and enhance utilization of obtained location information." Pet. 14 (referencing Ex. 1021 ¶¶ 191–195 (addressing reasons to combine teachings of Obradovich with Sheha).

Upon review of the information in the Petition and corresponding evidence, including Petitioner's reasoning for modifying Sheha with Obradovich's teaching, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Sheha and Obradovich teaches or suggests limitation 24(b). Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

c) Limitation 24(c)

Claim 24 also recites that the remote system is capable of "receiving from said first wireless telephone information indicative of a login and a password." Ex. 1008, 14:64–65 (limitation "24(c)"). Petitioner contends that Sheha discloses the functionality of receiving a login and password. Pet. 39 (referencing Ex. 1021-8 ¶ 112). Petitioner contends that "Sheha states 'every telephone account user has a username and password for the ODAS 3,' and the ODAS verifies that users are signed on to access various available services using authorization and authentication protocols." *Id.* (referencing Ex. 1041, 8:40–53, 11:55–12:7, 19:47–20:21 (providing claim 54); Ex. 1021-8 ¶ 112).

Petitioner alternatively argues that Obradovich and Ganesh describe entering a username and password into a mobile device, which Petitioner

characterizes as "routine and conventional." Pet. 39 (referencing Ex. 1055, 26:38–44; Ex. 1049, 5:1–22; Ex. 1021-8 ¶ 113). Petitioner contends that, "[b]ecause a mobile device may request the location of another device in Sheha's system, it would have been obvious this request could include inputting a login and password on the device for the user's ease." *Id.* at 39–40 (referencing Ex. 1021-8 ¶¶ 113–114); *see also id.* at 14–15 (presenting contentions as to why a person having ordinary skill in the art would have combined Obradovich's and Ganesh's teachings with Sheha).

Upon review of the information in the Petition and corresponding evidence, including Petitioner's reasoning for modifying Sheha with Obradovich's and Ganesh's teachings, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that the combination of Sheha, Obradovich, and Ganesh teaches or suggests limitation 24(c). Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

d) Limitation 24(d)

Claim 24 also recites that the remote system is capable of:

> determining whether to allow access of location information for said one of said plurality of wireless telephones associated to said selected one of said plurality of users, wherein said determining includes identifying said user of said first wireless telephone using said information indicative of said login and password and determining whether said selected one of said plurality of users has provided access rights for said location information to said user of said first wireless telephone.

Ex. 1008, 14:66–15:8 (limitation "24(d)"). Petitioner contends that "Sheha's authentication and authorization functionality includes identifying the user of the requesting device based on a login and password and determining whether the target device's user has provided the identified requestor access

rights." Pet. 40 (referencing Ex. 1021-8 ¶¶ 115–117). Petitioner contends that

> [i]n Sheha's system, "the ODAS 3 correlates both the origin and destination telephone users' identifications to verify if the user is signed-on to the ODAS 3 using authentication and authorization protocols" to "establish that a user is genuine and verify the level of authority each user is granted, such as for differentiating services provided by the ODAS 3."

Id. (quoting Ex. 1041, 8:43–50). Petitioner contends that, "[a]fter identifying the user via the login information, Sheha's system determines whether that user has location access rights by, for example, 'utilizing a group database and authorization and authentication protocols to identify users that are permitted to access this information.'" *Id.* (referencing Ex. 1041,11:65–12:1, 19:47–20:21 (providing claim 54); Ex. 1021-8 ¶ 116).

Patent Owner argues that "[d]evice users in Sheha *never* provide access rights to another specific individual user." Prelim. Resp. 36. Patent Owner argues that "Sheha instead describes a user being able to implement 'privacy settings' on his device to control when and to what extent his device will convey position information to one or more other devices." *Id.* (referencing Ex. 1041, 4:35–40, 4:62–5:2, 5:3–11, 5:37–45, 10:17–20, 10:47–50, 11:3–8, 12:1–4). Patent Owner also argues that Petitioner relies on a landline embodiment to support its contentions. *Id.*

We have reviewed Patent Owner's arguments and determine, on the current record, that they do not demonstrate a deficiency in Petitioner's position at this stage of the proceeding. As we discussed above in our analysis of claim 1, Petitioner's reliance on Sheha's teaching of a group database as a way to assign access rights to a user's location and contention that Sheha teaches that this database can be used in a mobile phone

embodiment is sufficient, at this stage of the proceeding, to support the Petition's contentions on the capability of Sheha's remote server. *See* Ex. 1041, 11:55–12:7; *see also* Pet. 40 (relying on the disclosure of a group database and authorization and authentication protocols in support of its unpatentability position).

Accordingly, upon review of the information in the Petition and corresponding evidence, and Patent Owner's counter arguments, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 24(d).

e) Limitation 24(e)

Claim 24 also recites that the remote system is capable of "determining whether said user of said first wireless telephone has assigned location access rights to said one of said plurality of wireless telephones associated with said selected one of said plurality of users for obtaining a location of said first wireless telephone." Ex. 1008, 15:9–14 (limitation "24(e)"). Petitioner contends that "Sheha utilizes a group database to store privacy settings identifying requestors that are permitted to access a user's location information." Pet. 40–41 (referencing Ex. 1041, 11:65–12:7, 14:62–15:24 (providing claim 13), 18:9–35 (providing claim 45); Ex. 1021-8 ¶ 118). Petitioner contends that

> Sheha's system determines not only whether the requestor has authorization to receive the target device's location, but also whether the requestor has assigned location access rights to the target device's user so the target device could receive location information of the requesting device.

Id. at 41 (referencing Ex. 1041, 14:28–37 (providing claim 4), 15:39–48 (providing claim 16), 18:9–35 (providing claim 45); Ex. 1021-8 ¶¶ 118–119).

Patent Owner repeats its arguments that Sheha does not disclose assigning privacy settings and that the group database applies to a landline embodiment. Prelim. Resp. 37–38. For the reasons discussed above for limitation 24(d) and our analysis of claim 1 under this ground, we determine, on the current record, that Patent Owner's arguments do not show a deficiency in Petitioner's contentions at this stage of the proceeding.

Patent Owner also argues that "there is no disclosure in Sheha that the ODAS determines whether 'location access rights' have been assigned by one specific device to another device specific device, or has the capability to do so." Prelim. Resp. 39. We do not agree on the current record. We determine that Petitioner has demonstrated, sufficient for institution, that Sheha's ODAS has the capability of storing in a database a list of users who have access rights to another user's location information and determining if one of a plurality of users is listed in that database. *See* Pet. 40–41 (identifying Sheha's disclosure of a user database); *see, e.g.*, Ex. 1041, 14:28–37 (providing claim 4, and disclosing that a user group "consist[s] of a plurality of group members pre-defined by the receiver, each group member of the receiver user group being a user of the telecommunication network," where the system will transmit to a caller the location of the receiver if the caller is a group member).

Accordingly, upon review of the information in the Petition and corresponding evidence, and Patent Owner's counter arguments, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 24(e).

f) Limitation 24(f)

Finally, claim 24 recites that the remote system is capable of "transmitting over said communications network said location information to said first wireless telephone." Ex. 1008, 15:15–16 (limitation 24(f) of claim 24). Petitioner contends that Sheha discloses that the system transmits the location information for a mobile device to a requesting device. Pet. 41 (referencing Ex. 1041, 11:23–26, 11:32–35, 12:1–7; Ex. 1021-8 ¶ 120).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Sheha teaches or suggests limitation 24(f). Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this stage of the proceeding.

g) Preliminary Conclusion as to Claim 24

Having reviewed the preliminary record, including Petitioner's showing as to how Sheha teaches or suggests each of the limitations of claim 24, we determine that Petitioner demonstrates a reasonable likelihood that independent claim 24 is unpatentable under 35 U.S.C. § 103(a) over Sheha, Obradovich, Degnbol, Ganesh, and Bechtolsheim.

4. Dependent Claims 25–44

Although we determine that Petitioner has demonstrate a reasonable likelihood of prevailing as to at least one Challenged Claim, and we institute on all challenges, we have reviewed Petitioner's contentions and citations to the evidence, including reasons for combining the teachings of Obradovich, Degnbol, Ganesh, and Bechtolsheim with Sheha, and determine that Petitioner has made a sufficient showing, on the current record, that dependent claims 25–44, which depend ultimately from independent

claim 24, are unpatentable under 35 U.S.C. § 103(a) over Sheha, Obradovich, Degnbol, Ganesh, and Bechtolsheim.

Patent Owner does not make any arguments directed to these dependent claims, except for the arguments directed to independent claim 24, which we address above in connection with our analysis of claim 24 under Ground 1.

E. Ground 2: Claims 1–44 as Unpatentable Under 35 U.S.C. § 103(a) over Enzmann, Obradovich, Degnbol, Ganesh, and Bechtolsheim

As we discuss above, Petitioner has demonstrated a reasonable likelihood of success in proving that at least one of the Challenged Claims of the '024 patent is unpatentable, and we institute on all challenges raised in the Petition. We will address Ground 2 on the complete trial record.

III. CONCLUSION

For the foregoing reasons, we conclude that the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail in showing that at least one of the Challenged Claims of the '024 patent is unpatentable. Accordingly, we institute an *inter partes* review proceeding on all challenges in the Petition.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review of claims 1–44 of the '024 patent is hereby instituted on all grounds stated 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.

FOR PETITIONER:

John C. Alemanni
Carl E. Sanders
Courtney Dabbiere
KILPATRICK TOWNSEND & STOCKTON LLP
jalemanni@kilpatricktownsend.com
csanders@kilpatricktownsend.com
cdabbiere@kilpatricktownsend.com

FOR PATENT OWNER:

Peter F. Snell
Brad M. Scheller
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.
pfsnell@mintz.com
bmscheller@mintz.com