

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC, SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA, INC.

Petitioner,

v.

MULLEN INDUSTRIES LLC,
Patent Owner.

IPR2025-00018
Patent 11,122,418 B2

Before JEFFREY S. SMITH, MIRIAM L. QUINN, and
BARBARA A. PARVIS, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

Petitioners filed a Petition (Paper 4, “Pet.”) requesting *inter partes* review of claims 1–30 of U.S. Patent No. 11,122,418 B2 (Ex. 1001, “the ’418 patent”) pursuant to 35 U.S.C. § 311(a). Patent Owner filed a Preliminary Response (Paper 8, “Prelim. Resp.”) pursuant to 35 U.S.C. § 313.

Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the Petition and 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 that follow, we institute an *inter partes* review as to claims 1–30 of the ’418 patent on all grounds of unpatentability asserted in the Petition.

B. Related Matters

The parties state that the ’418 patent is the subject of civil action in the United States District Court for the Eastern District of Texas (Case. No. 2:24-cv-49) (“parallel district court litigation”). Pet. xi; Paper 5, 1. The ’418 patent was also the subject of IPR2023-00090, which was terminated after institution due to settlement. Pet. xii; *Apple Inc. v. Mullen Industries LLC*, IPR2023-00090, Paper 19 (PTAB Nov. 7, 2023) (Termination).

C. The ’418 Patent

The ’418 patent, which was filed on September 14, 2021, is a continuation of U.S. Patent No. 9,635,540 filed on March 25, 2003, and claims the benefit of the filing date of Provisional application No. 60/367,967, filed on March 25, 2002. We remind the parties that “the Board

has no basis to presume that [the '418] patent is necessarily entitled to the filing date of its provisional application.” *Dynamic Drinkware, LLC v. National Graphics, Inc.*, 800 F.3d 1375, 1380 (Fed. Cir. 2015). Patent Owner at this stage does not contend that the '418 patent is entitled to the filing date of its provisional application. *See generally* Prelim. Resp. At this stage, we consider that the '418 patent is entitled to the benefit of its March 25, 2003 filing date.

The '418 patent “relates to systems and methods for remotely determining a device’s location.” Ex. 1001, 1:19–20. For example, the '418 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., requested user) based upon requestor-assigned access rights.” *Id.* at 1:39–43.

Figure 2 of the '418 patent is reproduced below:

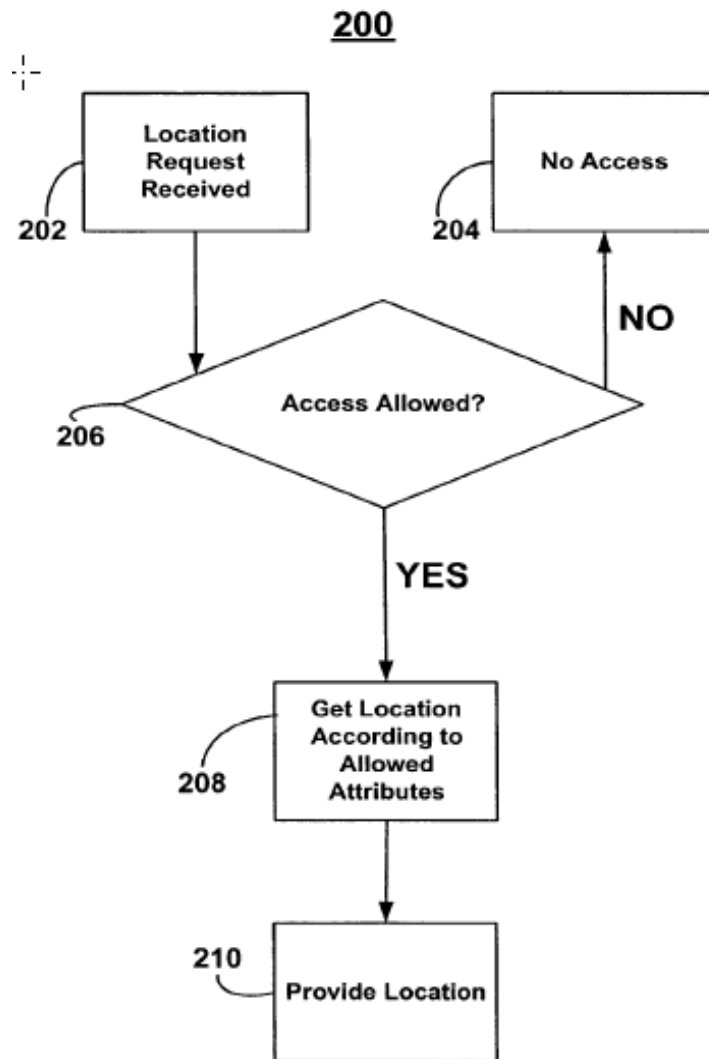


FIG. 2

Figure 2 of the '418 patent depicts a flow chart for locating another user's cell phone according to one embodiment. Ex. 1001, 4:51–53, Fig. 2. As shown, a request may be received from a first user for the location of a second user's cell phone (step 202). *Id.* at 4:54–55. It is then evaluated if the first user is allowed to access the location of the second user (step 206). *Id.* at 4:55–57. If so, the location of the second user's cell phone may be

retrieved from a remote database, facility, distribution center, or any other system (step 208). *Id.* at 4:66–5:2, 5:11–14. The allowed location information of the second user may then be provided to the first user (step 210). *Id.* at 4:66–5:2.

The '418 patent also describes that “a unique dating/matching service could be embodied.” Ex. 1001, 5:64–6:19. For example, a user may store (1) a matching (“looking for”) profile with preferences describing what type of person he/she is interested in meeting, as well as (2) his/her own profile with data describing similar attributes for what he/she is looking for. *Id.* at 5:65–6:4. “For example, an entry in a user’s profile may be ‘male’ and an entry in [the user’s] ‘looking for’ profile may be ‘female.’” *Id.* at 6:4–6. In operation, “[w]hen a user comes within a certain distance of a user (determined by comparing locations of a user) that fits his/her ‘looking for’ profile, the user may be alerted of the proximity of a matching user.” *Id.* at 6:6–10. And, “[p]referably, the particular user is only alerted if the ‘looking for’ user has entered in attributes similar to the particular user’s attributes and is also alerted of the particular user.” *Id.* at 6:10–13.

The '418 patent also describes that a map with a marker identifying a second user’s location may be provided to a first user on their cell phone’s display screen. Ex. 1001, 2:22–30; *see id.* at 8:12–21.

Figure 6 of the '418 patent is reproduced below.

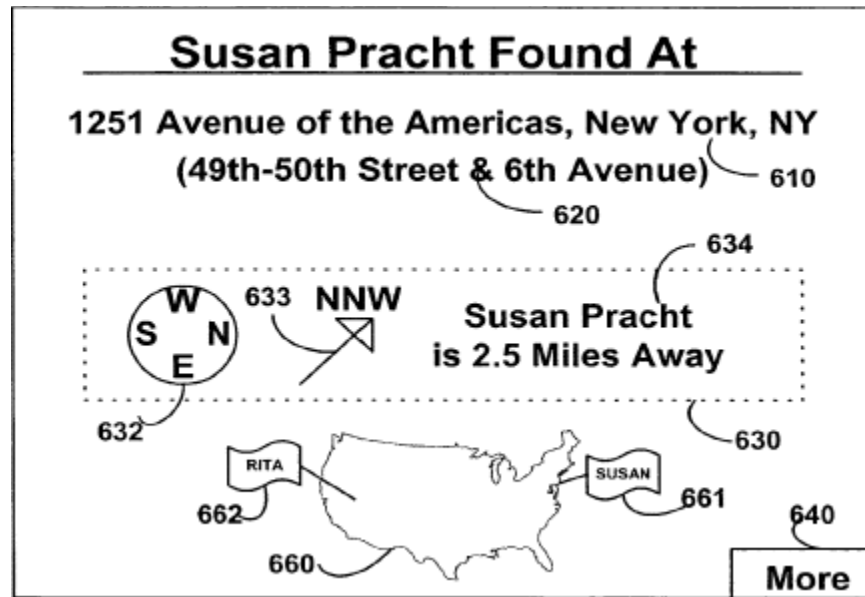


Figure 6 of the '418 patent above depicts display screen 600 including various location information according to one embodiment. Ex. 1001, 7:31–33, Fig. 6. The '418 patent describes that “[w]hen a location is retrieved for the requested user, the location may be displayed on Display Screen 600 through primary location information 610,” for example, as an address. *Id.* at 7:33–39, Fig. 6 (item 610). What primary location information 610 may be provided depends on the scope of the requesting user’s access rights. *Id.* at 7:36–37.

Display screen 600 may also include secondary location information 620, such as the cross street or name of a building, that supplements the requested user’s exact location. *Id.* at 7:43–50. Directional information 630 can also be shown on display screen 600, including digital compass 630 indicating the cell phone user’s direction, directional arrow 633 indicating the requested user’s location relative to the location and direction of the cell phone, and distance information 634 indicating the distance between the

requested and requesting users. *Id.* at 7:51–61, 8:6–8. The “time to reach the destination according to specific types of travel (e.g[.], subway, walking, running, driving) and the direction the requested user is traveling in” may also be displayed. *Id.* at 8:18–21. Also shown is map 660, which displays the locations and names of multiple users. *Id.* at 8:49–51. For example, map 660 outlines the United States and indicates that a user 661 named Rita is located near Las Vegas, Nevada, and that a user named Susan is located near Wilmington, Delaware. *Id.*, Fig. 6.

D. Illustrative Claim

Challenged claim 1 of the ’418 patent recites:

A system comprising:

a first wireless device, wherein a location of said first wireless device is operable of being determined and provided to a remote system,

said location of said first wireless device is operable of being requested by a second wireless device outside of a call for communication between said first wireless device and said second wireless device,

a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location,

said permission is operable of being stored in said remote system, wherein said remote system is located remotely from said first and second wireless devices,

said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call, wherein said first wireless device is operable of providing a first map provided with respect to said location.

Ex. 1001, 13:17–36.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–30 of the ’418 patent are unpatentable on the following grounds:

Reference(s)	Basis	Challenged Claims
Sheha ¹	§§ 102, 103	1–3, 6, 7, 10, 13, 18–21, 24, 26, 27, 30
Sheha, Ryden ²	§ 103	4, 5, 11, 17, 22, 23, 28, 29
Sheha, Tanaka ³	§ 103	8, 9, 12, 14, 25
Sheha, Ganesh ⁴	§ 103	15–17
Randall ⁵	§§ 102, 103	1–3, 6–10, 13, 14, 18–21, 24–27, 30
Randall, De-Vries ⁶	§ 103	12

¹ U.S. Patent No. 7,333,820 B2, filed July 11, 2002, issued Feb. 19, 2008 (Ex. 1005). Petitioner, relying on the testimony of Dr. Williams, contends that Sheha is entitled to the benefit of the July 17, 2001 filing date of Provisional Application No. 60/305,975, because the provisional application provides written description support for claim 1. Pet. 6 (citing Ex. 1002 ¶¶ 76–81). We remind the parties that “the provisional application must also provide written description support for the specific portions of the patent specification identified and relied on in the” asserted grounds. *In re Riggs*, Case No. 2022-1945 *12 (Fed. Cir. Mar. 24, 2025). At this stage, Sheha qualifies as prior art because its filing date of July 11, 2002 is earlier than the ’418’s effective filing date of March 25, 2003.

² U.S. Patent No. 7,233,795 B1, filed March 19, 2002, issued June 19, 2007 (Ex. 1009).

³ U.S. Patent No. 6,819,919 B1, filed Oct. 18, 2000, issued Nov. 16, 2004 (Ex. 1011).

⁴ U.S. Patent No. 7,013,148 B1, filed Dec. 21, 2001, issued Mar. 14, 2016 (Ex. 1012).

⁵ U.S. Publication No. 2004/0024846 A1, filed Aug. 22, 2001, pub. Feb. 5, 2004 (Ex. 1007).

⁶ U.S. Patent No. 6,968,179 B1, filed July 27, 2000, issued Nov. 22, 2005 (Ex. 1013).

Reference(s)	Basis	Challenged Claims
Randall, Wollrab ⁷	§ 103	3, 10, 15–17, 21, 27
Randall, Ryden	§ 103	4, 5, 11, 17, 22, 23, 28, 29
Randall, Ganesh	§ 103	15–17

Pet. 2.

II. ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 314(a): Parallel District Court Litigation

Under 35 U.S.C. § 314(a), institution of *inter partes* review is discretionary. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016); *see also* 35 U.S.C. § 314(a). In *Amazon Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential), the Board set forth six non-exclusive factors for determining “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Id.* at 6. These factors are as follows:

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

⁷ U.S. Patent No. 6,920,328 B2, filed Aug. 30, 2001, issued July 19, 2005 (Ex. 1014).

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

Id. at 5–6. In evaluating these factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Id.* at 6.

1. *Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Patent Owner contends that “all evidence points to a stay not being entered in the district court pre- or post-institution” because “Judge Gilstrap . . . has already denied Petitioner Samsung’s request to stay the parallel district court case pre-institution” and “has ordered that Samsung may not refile any request for a stay until *after* ‘the PTAB’s institution decision on the last of the pending IPRs.’”⁸ Prelim. Resp. 24.

Given that the district court denied Samsung’s motion to stay “without prejudice to refile of the same within fourteen (14) days following the PTAB’s institution decision on the last of the pending IPRs” (Ex. 2008, 3), we decline to speculate whether the district court will grant a stay. Thus, we find that factor 1 is neutral.

2. *Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

Patent Owner contends that the “district court trial is set for November 3, 2025, which is more than six months before the earliest expected date of a FWD (mid-May 2026) in this Petition.” Prelim. Resp. 27.

⁸ From September 30, 2024 through December 30, 2024, Petitioner filed or co-filed with Google LLC eleven *inter partes* review petitions challenging all claims of the patents asserted in the parallel district court litigation. See Ex. 2008, 2 n.2.

Petitioner contends that a “motion is pending to transfer the district-court proceeding to the Northern District of California (Ex[.] 1036[,] 8).” Pet. 75–76. However, on March 25, 2025, the District Court denied the motion to transfer. Ex. 2026. Thus, we find that factor 2 weighs in favor of exercising discretion.

*3. Investment in the parallel proceeding
by the court and the parties*

Patent Owner contends that the parties “have prepared and exchanged infringement and validity contentions, presented initial disclosures,” have begun claim construction discovery and fact discovery, and will brief claim construction by the time the Board decides whether to institute. Prelim. Resp. 29. Patent Owner contends that “Petitioners waited over eight months after the district court complaint was filed to submit [the Petition].” *Id.* at 30.

Petitioner contends that the “parties have invested little in invalidity-related issues, the scheduled *Markman* hearing is over seven months away (Ex[.] 1038[,] 3), and ‘a significant portion of work remains to be done in the district court proceeding—e.g., the completion of fact and expert discovery and dispositive motions.’” Pet. 76. Petitioner contends that “Petitioner filed this Petition less than five months after receiving Mullen’s infringement contentions and about four months before any statutory bar.” *Id.*

We agree with Petitioner that much work remains in the district court case as it relates to invalidity because discovery is in its early stages and a *Markman* hearing has not yet occurred. Petitioner filed the Petition nine months after Patent Owner filed its complaint in district court and five

months after Patent Owner served its infringement contentions. Prelim. Resp. 30. The instant Petition largely copies from previously filed petitions. Although the filing of the Petition does not seem diligent, the timing overall does not outweigh the limited investment in the district court litigation. Thus, we determine that this factor is neutral.

*4. Overlap between issues raised
in the petition and in the parallel proceeding*

Patent Owner contends that “Petitioner challenges most of the *same* claims in their Petition . . . that they do in their invalidity contentions at the district court” and “rely on the same references in the Petition as they do in the district court.” Prelim. Resp. 31. Additionally, we note that the defendant’s invalidity contentions include system prior art and other invalidity defenses rooted on lack of written description, indefiniteness, enablement, and obviousness-type double patenting that cannot be asserted in an IPR. Ex. 2014, 116–119, 125–129.

Petitioner “stipulates that, if the [PTAB] . . . institutes this IPR petition on the grounds presented therein, then Samsung will not pursue in the [parallel district court] litigation any grounds that were raised or reasonably could have been raised in the IPR.” Ex. 1079; *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020).

We find that Petitioner’s stipulation mitigates some, but not all of the concerns of overlap, and weighs against exercising discretionary denial.

*5. Whether the petitioner and the defendant
in the parallel proceeding are the same party*

Patent Owner contends that the parties to this proceeding are the same parties in the parallel district court litigation. Prelim. Resp. 31–33. We

disagree. Although Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Mullen Industries LLC are parties in both proceedings, Google LLC is a party in this case but not in the district court litigation. Because of the involvement of a non-defendant, even if a named real party in interest in this proceeding, we find that this factor is neutral.

*6. Other circumstances that impact the
Board's exercise of discretion, including the merits*

Patent Owner contends that “the Petition (i) strategically chose not to address known disputes over the claim terms’ meaning and (ii) misreads both the claims and the cited references, which demonstrates the weakness of the Petition.” Prelim. Resp. 34.

We disagree. The issues raised by Petitioner are similar, if not identical, to those raised in IPR2023-00090, in which we instituted. We also disagree, on this record, that Petitioner misreads the claims and the cited references, as discussed below in both our claim construction and our analyses of Grounds 1 and 5. Patent Owner’s arguments on the merits rely extensively on Patent Owner’s proposed construction of the term “a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location,” as recited in claim 1 and in similar limitations in claims 18 and 19. We disagree with Patent Owner’s proposed construction and with Patent Owner’s corresponding arguments on the merits relying on the proposed construction. As discussed in detail below, at this stage of the proceeding, we find that Petitioner has shown that at least some claims of the ’418 patent recite well-known and obvious features of remotely locating a first wireless

device from a second wireless device. Due to strong merits, this factor weighs against exercising discretionary denial.

7. Conclusion

Having considered the factors above, including the timing of the proceedings, the amount of effort that has been and is yet to be expended in the parallel district court litigation, Petitioner's *Sotera* stipulation, and the merits of Petitioner's challenges, we find that, taken as a whole, the factors do not favor exercising discretion to deny institution. Although the earlier trial date weighs in favor of discretionary denial, the remaining factors are either neutral or weight against discretionary denial. Accordingly, we decline to exercise discretion to deny institution.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill "would have had a bachelor's 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 cellphones and personal digital assistants ("PDAs") as well as wireless positioning technologies, such as GPS or triangulation." Pet. 4. (citing Ex. 1003 ¶¶ 50–54). Petitioner further contends that "[m]ore education could compensate for less practical experience, and vice versa." *Id.* Patent Owner does not propose a level of ordinary skill.

The level of ordinary skill in the art usually is evidenced by the references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). As Petitioner's description of

a person of ordinary skill appears commensurate with the subject matter before us, we apply Petitioner's definition for purposes of this Decision.

C. Claim Interpretation

We interpret the challenged 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) (2022). "In determining the meaning of [a] 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). Claim terms are given their plain and ordinary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

We construe expressly only those claim terms that require analysis to determine whether to institute inter partes review. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

Petitioner has not proposed a particular construction for any recited claim term. Pet. 5. In contrast, Patent Owner proposes construction of the term “a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location” recited in claim 1 and similar limitations recited in claims 18 and 19. Prelim. Resp. 8 (emphasis omitted). Patent Owner contends that Petitioner ignores the claim language that requires the “permission” to be “provided by” a specific device, such as the same “first wireless device” recited in claim 1. *Id.* at 9–10 (emphasis omitted). Patent Owner further contends that Petitioner incorrectly argues that “a permission . . . for” the specific device recited in the claim can be satisfied when a group policy allows the device to access location information. *Id.* at 10 (emphasis omitted). According to Patent Owner, Petitioner improperly rewrites this claim term as “a policy that may result in allowing said second wireless device to access location information about said location.” *Id.* (emphasis omitted).

Patent Owner contends that a group policy that allows a group to access location information may be an empty set, or the group members may change over time. Prelim. Resp. 11. According to Patent Owner, the group policy imposes risk of erroneously allowing or disallowing access to location information, because a user may forget that the group is allowed

access when adding a member to the group, or a user may forget that a member was deleted from the group. *Id.* Patent Owner contends that the '418 patent recognizes this risk in describing that "[o]ne object of the present invention is to provide a security feature which allows a user to limit and/or deny location access to a particular user." *Id.* at 11–12 (citing Ex. 1001, 1:44–46). Patent Owner provides additional arguments to support its contention that the claimed "permission," read in light of the Specification, excludes a group permission. *Id.* at 12–18. Finally, Patent Owner contends that during prosecution, the Examiner mapped the "permission" limitation to paragraph 18 of Barclay (Ex. 2004). *Id.* at 18–19 (citing Ex. 1002, 667). According to Patent Owner, paragraph 18 of Barclay discloses "permission options . . . to selectively allow the customer to allow certain individuals the ability to see the customer's location information," which demonstrates that the Examiner interpreted this limitation to require each permission to be for a specified device. *Id.* at 19 (quoting Ex. 2004 ¶ 18) (emphasis omitted).

We disagree with Patent Owner on this record. Claim 1 recites "a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location." The claim does not recite that the permission is limited to permission for only the second wireless device. The ordinary and customary meaning of "a permission . . . for said second wireless device to access location information" encompasses a permission that allows other devices, in addition to the "second wireless device," to access location information.

The disclosure in the written description is consistent with the ordinary and customary meaning. Although the written description states that an object of the invention is to provide a security feature which allows a

user to limit or deny access to a particular user, the written description discusses other purposes served by the permission. For example, the written description discloses “[u]sers may be added, individually or in groups, to a list of users with location access rights to a specific user by that specific user. A specific user may, at any time, modify, delete, or add users allowed to access his or her location.” Ex. 1001, 3:23–27. The written description further discloses that “a user may organize his/her user list into groups and assign access rights to that group (e.g., family member user group, close friend user group).” *Id.* at 13:9–14.

The fact that the written description of the ’418 patent sets forth multiple objectives to be served by the permission confirms that the term “permission” should not be construed as limited to a permission for only the second wireless device. *Phillips*, 415 F.3d at 1327. Further, because the written description here includes an embodiment where a user assigns access rights to a group, we are persuaded that the scope of this claim term as read in light of the written description encompasses a group permission. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (holding that interpreting a claim to exclude an embodiment disclosed in the written description “is rarely, if ever, correct and would require highly persuasive evidentiary support, which is wholly absent in this case.”).

With respect to the prosecution history, the Examiner did map the “permission” limitation to paragraph 18 of Barclay. But paragraph 18 of Barclay discloses that “the customer may select a quantity of telephone numbers for which permission is always given (e.g., for family members, friends, or emergency services such as police or fire department).” Ex. 2004 ¶ 18. Thus, contrary to Patent Owner’s contention, the Examiner, in citing

paragraph 18 of Barclay, indicated that a person of ordinary skill in the art would have considered the scope of the “permission” limitation to encompass a group policy.

At this stage, we interpret the scope of the claim term “a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location” to encompass at least the disclosed embodiment of a group policy “operable of being provided by said first wireless device for said second wireless device” and other devices “to access location information.”

Ground 1: Obviousness based on Sheha

Petitioner contends that claims 1–3, 6, 7, 10, 13, 18–21, 24, 26, 27, and 30 are unpatentable over Sheha. Pet. 2, 8–27.

1. Overview of Sheha (Ex. 1005)

Sheha relates to systems for obtaining real-time remote and local position information in a mobile environment for mapping, routing, and direction finding purposes. Ex. 1005, 1:16–18, 2:60–63.

Figure 3 of Sheha is reproduced below.

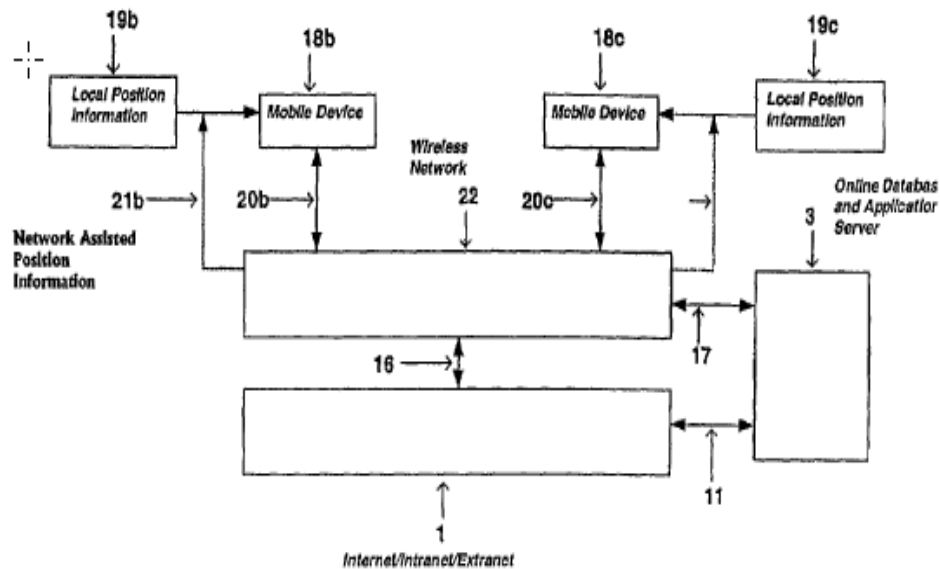


Figure 3 of Sheha “illustrates how a typical mobile-to-mobile connection can be established using a plurality of different telephone and/or computing devices.” Ex. 1005, 6:45–47, Fig. 3. As shown, “a user placing a . . . call from a mobile device 18b . . . inputs a telephone number of another mobile device 18c,” and “the position information of each device can be updated in the [application server] ODAS 3 prior to establishing the . . . call, depending on each mobile device’s 18b and 18c privacy settings.” *Id.* at 10:66–11:8. “The position information is calculated . . . by . . . an onboard positioning information device 19b . . . connected to the mobile device 18b, or by receiving position information from the wireless network 22 using a network assisted positioning approach 21b.” *Id.* at 11:15–20. “When a mobile device 18b dials a telephone number, the position information and destination telephone number is transferred to the wireless network 22 by . . . wireless connection 20b.” *Id.* at 11:12–15. Through various means, the ODAS 3 may receive “both the originating and destination telephone numbers, users account information, and position information for both

mobile devices 18b and 18c.” *Id.* at 11:20–37. “In one embodiment, prior to the destination mobile device 18c receiving the telephone call from the originating mobile device 18b, the wireless network sends the position information, obtained from the ODAS 3, in the form of [] Map Caller-ID” information received by “both the originating and destination mobile device.” *Id.* at 11:37–44. “[M]obile devices 18b and 18c continually send their updated position information to the ODAS 3,” and “[t]he ODAS 3 periodically updates each mobile device with the other’s position information, thus providing real-time driving directions and route information.” *Id.* at 11:44–51.

According to Sheha, “[a] mobile or landline device can also request position information of another mobile or landline device by only specifying a telephone number, without having to initiate a telephone call.” Ex. 1005, 11:55–58. “When 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.” *Id.* at 12:1–4. In another embodiment, a user can request the position of a mobile device using authorization and authentication protocols that identify users that are permitted to access this information. *Id.* at 11:61–12:1, 12:4–7.

Sheha also describes various embodiments in which position and identification information related to an incoming call are shown on the user’s display device. *See* Ex. 1005, 9:4–39, Figs. 4, 5. Figure 5 of Sheha is reproduced below.

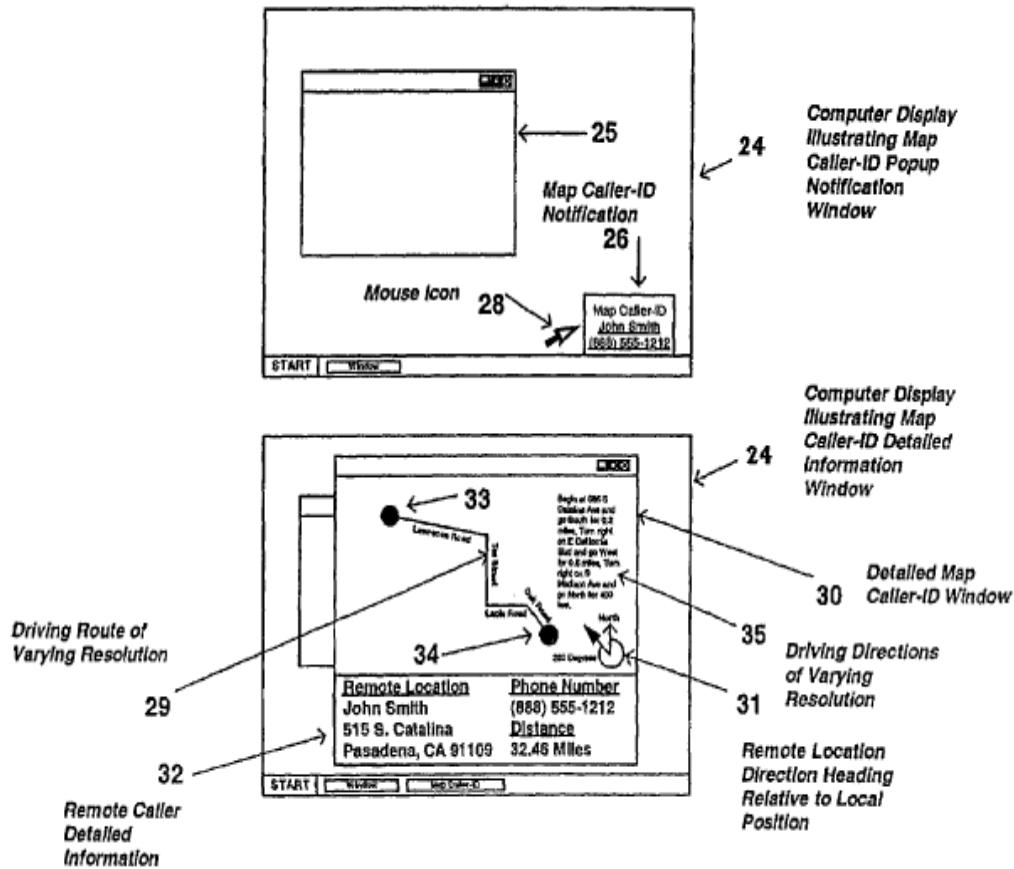


Figure 5 of Sheha depicts “an example of a Map Caller-ID indicator and a display window detailing a plurality of various possible features utilizing the position and/or address location information of the remote caller and local device or person that is called.” Ex. 1005, 6:52–56. As shown, when a call is incoming, a Map Caller-ID notification window 26, including the caller’s name and telephone number 27, may appear on the user’s display 24. *Id.* at 9:4–13. “[T]he user may [then] use a mouse icon 28 . . . to activate the original notification window 26 to access additional information,” after which “the notification window 26 closes and a new information window 30 appears.” *Id.* at 9:14–16, 9:19–22.

New information window 30 may be “a detailed Map Caller-ID information window of varying resolution displaying the originating position information, such as a map location 33 of the caller, and the user’s location position information, such as a map location 34 of the destination telephone number.” *Id.* at 9:23–28. The new information “window 30 can also provide a driving route 29 of varying resolution and driving directions 35 of varying resolution,” and it “can . . . display remote location direction heading information relative to local position information 31 in addition to elevation, line-of-sight distances, and curved Earth line-of-sight distances.” *Id.* at 9:28–34. In addition, the new information “window 30 can display all of the identification information 32 of both the originating and destination users, such as addresses and telephone numbers, and 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.” *Id.* at 9:34–39.

2. Analysis of Claim 1

Preamble

The preamble of claim 1 recites a “system comprising.” Petitioner contends, to the extent it is limiting, Sheha discloses the features recited in the preamble of claim 1. Pet. 8. In particular, Petitioner contends that Sheha discloses systems enabling users of telephone devices to determine and share their own location with other telephone devices, and request the locations of other telephone devices. *Id.*

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha teaches the features recited in the preamble of claim 1. Because we

determine that Sheha teaches the preamble, we need not decide whether the preamble is limiting at this stage.

A first wireless device . . .

Claim 1 recites “a first wireless device, wherein a location of said first wireless device is operable of being determined and provided to a remote system.” Petitioner contends that Sheha discloses this limitation in describing that a mobile device or the network can determine the position of the mobile device, and supply the position to the online database and application server (ODAS). Pet. 8–9.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha teaches the features recited in this limitation of claim 1.

Said location . . . is operable of being requested . . . outside of a call

Claim 1 recites “said location of said first wireless device is operable of being requested by a second wireless device outside of a call for communication between said first wireless device and said second wireless device.” Petitioner contends that Sheha discloses this limitation in describing one wireless device requesting the position of another wireless device without having to initiate a telephone call. Pet. 9.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha teaches the features recited in this limitation of claim 1.

A permission is operable of being provided . . .

Claim 1 recites “a permission is operable of being provided by said first wireless device for said second wireless device to access location

information about said location.” Petitioner contends that Sheha discloses this limitation in describing a mobile device which can have privacy settings allowing the device to prevent or limit other calling devices from obtaining position information. Pet. 10–15 (citing Ex. 1005, 3:22–28, 4:8–18, 4:59–5:46, 8:42–53, 9:59–10:4, 10:17–26, 11:55–12:7; Ex. 1003 ¶¶ 108–121).

Patent Owner contends that Sheha discloses that each device has privacy settings that either allow or prevent location information from being sent during a call. Prelim. Resp. 46–47. Patent Owner contends that sending or receiving location information according to privacy settings for a call does not depend on access rights provided for another device, but on privacy settings for location requests during the call. *Id.* at 47–49.

Patent Owner further contends that Sheha discloses that users can define a group of specific users that have access to location information in a group database. Prelim. Resp. 49. Patent Owner contends that the group database is used for landline-to-landline requests, not mobile-to-mobile requests. *Id.* at 49–50. Patent Owner contends that the group policy stored in the database is not a permission for a specific device to access location information as claimed. *Id.* at 50. Patent Owner contends that the group database does not provide the advantages of eliminating security risk and improving system security as disclosed by the ’418 patent. *Id.* at 50–51.

Petitioner contends that claim 1 does not recite that the “permission” is exclusively “for said second wireless device.” Pet. 11. Petitioner contends that claim 1 recites a permission “for said second wireless device to access location information.” *Id.* (emphasis omitted). Petitioner contends that the claim itself limits what the permission is for accessing, and does not exclude the permission from also allowing other devices “to access location

information” as claimed. *Id.* (emphasis omitted). Petitioner contends that claim 1, read in light of the Specification, encompasses a user organizing his/her user list into groups and assigning access rights to each group as disclosed by the ’418 patent. *Id.* at 12 (citing Ex. 1001, 13:9–12, 3:23–25).

Petitioner further contends that even if claim 1 required providing a permission specific to an individual second-device user, a person of ordinary skill in the art would have known that defining a group of authorized users as taught by Sheha includes defining a group having only one member. *Id.* at 12 (citing Ex. 1004, 11:63–65; Ex. 1003 ¶ 112). Petitioner contends that allowing a user to provide a permission specific to an individual in addition to providing a permission for a group was well known at the time of invention. *Id.* (citing Ex. 1003 ¶¶ 113–115; Ex. 1007 ¶¶ 52, 70, 136, 144–146; Ex. 1015, 12:60–13:21).

With respect to Patent Owner’s contention that Sheha discloses that each device has privacy settings that either allow or prevent location information from being sent during a call, Petitioner contends that the privacy settings local to a device are complementary to the group permission stored in the database. Pet. 13. Petitioner contends that when both the privacy settings and the group permission stored in the database are employed, a requesting user would have access to location information of the target device only if the requesting user has permission in the group database and if the privacy settings of the target device allow location sharing. Pet. 14 (citing Ex. 1003 ¶ 117).

With respect to Patent Owner’s contention that the group database is used for landline-to-landline requests, not mobile-to-mobile requests, Petitioner contends that Sheha discloses that the mobile-to-mobile

embodiment uses the same authorization protocols as the landline embodiments. *Id.* Petitioner contends that even if Sheha does not explicitly disclose using the group database permissions in the mobile-to-mobile embodiment, a person of ordinary skill in the art would have done so to yield the same benefit as doing so for the landline embodiment, namely, allowing a user to specify a group of other users who have permission to access location information without initiating a phone call. *Id.* at 15 (citing Ex. 1003 ¶¶ 118–121).

On this record, we agree with Petitioner. We are not persuaded at this stage by Patent Owner’s contention that the group database having permission to access location information is limited to landline-to-landline requests. Although Sheha teaches correlating a specified telephone number to position information in a database for a landline-to-landline position request, Sheha also discloses that location information for a mobile device is stored in a database. *Id.* at 11:3–8, 11:58–61. Sheha teaches that “[i]n another embodiment, users can define a group of specific users that have access to [location] information” and that “a user can request the position of a mobile device, similarly to requesting the position of a landline device.” Ex. 1005, 11:55–12:7. On this record, we are sufficiently persuaded that Sheha discloses that location information for both landline phones and mobile phones is stored in a database, and that a mobile device can request the location of either a landline phone or a mobile phone from the database. We also agree with Petitioner that the privacy settings local to a device are complementary to the group permission stored in the database.

Patent Owner’s contention that the claim requires a single permission for a single device is not commensurate with the scope of the claim as we

discussed above in our construction of this term. The claim does not recite a single permission, but rather, recites “a permission,” which, when read in light of the Specification, encompasses one or more permissions. Ex. 1001, 3:23–25, 13:9–12. Sheha teaches that users can define a group of specific users that have access to the location information of a mobile device using a group database and protocols to identify users that are permitted to access the location information. Ex. 1005, 11:63–12:7. Further, on this record, we agree with Petitioner and we credit Mr. Williams’s testimony that a user can define a group of one, and that assigning a permission to a single individual was known in the art. Ex. 1003 ¶¶ 112–115. At this stage, we are preliminarily persuaded that a user who defines a group of one or more users that have access to the location of that user’s mobile device as taught by Sheha teaches “a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location” as claimed.

Said permission is operable of being stored

Claim 1 recites “said permission is operable of being stored in said remote system, wherein said remote system is located remotely from said first and second wireless devices.” Petitioner contends that Sheha discloses this limitation in describing that users can define a group of specific users that have access to the user’s location information by utilizing a group database and authorization and authentication protocols implemented by the ODAS remote system to identify users that are permitted to access this information. Pet. 15–16.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha teaches the features recited in these limitations of claim 1.

Said location information

Claim 1 recites “said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call.” Petitioner contends that Sheha discloses this limitation in describing that when a mobile device’s position information is requested, the system responds with the appropriate position information based on the privacy settings. Pet. 23.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha teaches the features recited in this limitation of claim 1.

Wherein said . . . device is operable of providing a first map

Claim 1 recites “wherein said first wireless device is operable of providing a first map provided with respect to said location.” Petitioner contends that Sheha discloses this limitation in describing a map showing the locations of the target and requesting wireless devices, and that the map can be displayed on the mobile telephone. Pet. 18–19 (citing Ex. 1004, Fig. 5, 3:50–55, 4:13–18, 4:22–26, 4:43–5:11, 9:23–39, 11:36–12:31; Ex. 1003 ¶¶ 133–137).

Patent Owner contends that Sheha does not disclose displaying the map of Figure 5 on a mobile phone. Prelim. Resp. 55–56. Patent Owner contends that although the mobile phone receives map information, the mobile phone passes the map information to a navigational device better suited for navigational displays. *Id.* at 56–57. Patent Owner contends that

the map information is received using map caller-ID technology, which requires a telephone call to obtain location information. *Id.* at 57–58. Patent Owner contends that although Sheha discloses displaying a map and address of the destination telephone number on the mobile telephone, Sheha does not disclose displaying the map shown in Figure 5, nor does Sheha disclose the mobile telephone displaying the “map from the perspective of said first location” as claimed. *Id.* at 58–59.

Petitioner contends that Figure 5 of Sheha is the only type of map and address illustrated in Sheha, and that Sheha teaches that the no-call embodiment does not differ from the phone-call embodiment in how the information is displayed, which implies that the map displayed on the mobile telephone as taught by Sheha would be that of Figure 5. Pet. 19 (citing Ex. 1003 ¶ 136). Petitioner contends that although Sheha teaches that in some embodiments, maps are passed from the mobile telephone to an accompanying device better suited for navigational displays, in other embodiments the mobile telephone displays the map. *Id.* (citing Ex. 1005, 4:52–58, 12:8–41; Ex. 1003 ¶ 137). Petitioner also contends that displaying a map on the mobile telephone of Sheha without a telephone call was within the background knowledge of a person of ordinary skill in the art. Pet. 19–20 (citing Ex. 1003 ¶¶ 138–145; Ex. 1007 ¶ 21; Ex. 1016 ¶ 27; Ex. 1014, Figs. 1–4C; Ex. 1017, Fig. 2, 4:38–57, 5:13–17, 6:14–27, 6:59–7:6; Ex. 1018, Fig. 4b, 2:2–7, 3:59–67, 5:48–57).

On this record, we agree with Petitioner. Although Sheha discloses embodiments where location information is requested and received during a telephone call, Sheha also discloses embodiments where location information is requested and received by the mobile telephone without

having to initiate a telephone call. Ex. 1005, 11:55–58. Sheha discloses that once the position information has been obtained by the mobile telephone, and even though a navigational device is better suited for navigational displays, “a map and address of the destination telephone number can be displayed on the mobile telephone.” *Id.* at 4:56–58, 11:42–44, 12:1–10, 12:27–31. Sheha, on this record, does not seem to explicitly disclose a mobile telephone displaying the map with directions as shown in Figure 5, but Sheha does disclose a mobile telephone receiving location information without initiating a telephone call, the mobile telephone displaying the location information on a map, and provides Figure 5 as an example of displaying the location information on a map.

On this record, in considering the background knowledge as well as the inferences that an ordinarily skilled artisan would draw from Sheha’s disclosure, we are sufficiently persuaded that a person of ordinary skill in the art would have caused the mobile telephone to display the map of Figure 5. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (In an obviousness analysis, a court will “look to . . . the background knowledge possessed by a person having ordinary skill in the art” and “can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”). The references cited by Mr. Williams explicitly show what is already implicitly taught by Sheha, namely, that displaying the map of Figure 5 on a mobile telephone was within the background knowledge of a person of ordinary skill. Ex. 1003 ¶¶ 138–144; Ex. 1007 ¶¶ 2, 21, p. 85; Ex. 1016 ¶ 27; Ex. 1014, 3:28–31, 4:43–58; Fig. 4B; Ex. 1017, 4:38–57, 5:13–17, 6:14–27, 6:59–7:6, Fig. 2; Ex. 1018, 2:2–7, 3:59–67, 5:48–57, Fig. 4B. We agree with Mr. Williams, that a person of ordinary skill in the art, in

light of the teachings of Sheha and his or her background knowledge, would have caused a mobile telephone to receive location information without initiating a telephone call and would have used the location information to display a map on the mobile telephone in a form similar to that shown in Figure 5 as taught by Sheha and as was well known in the art. Ex. 1003 ¶¶ 133–144.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha discloses or renders obvious the features recited in this limitation of claim 1.

Conclusion for claim 1

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner demonstrates a reasonable likelihood that independent claim 1 is unpatentable over Sheha.

3. Independent claims 18 and 19

Petitioner relies, for the most part, on its contentions with respect to claim 1 for how the combination of Sheha disclose the subject matter of independent claims 18 and 19. *See* Pet. 23–26. Patent Owner relies on the arguments directed to independent claim 1, which we addressed above in connection with our analysis of claim 1 under Ground 1. *See* Prelim. Resp. 44, 54 (referencing arguments made for claim 1 with respect to claims 18 and 19).

Based on our analysis of claim 1, and review of Petitioner’s additional contentions and corresponding evidence directed to claims 18 and 19, we determine that Petitioner demonstrates a reasonable likelihood that independent claims 18 and 19 are unpatentable over Sheha.

4. Dependent Claims 2, 3, 6, 7, 10, 13, 20, 21, 24, 26, 27, 30

Petitioner contends that claims 2, 3, 6, 7, 10, 13, 20, 21, 24, 26, 27, 30 are unpatentable over Sheha. Pet. 20–23, 27. Patent Owner does not offer any specific arguments with respect to these claims. *See* Prelim. Resp. Based on the record before us, we are persuaded that the Petition sufficiently shows that claims 2, 3, 6, 7, 10, 13, 20, 21, 24, 26, 27, 30 are unpatentable over Sheha.

D. Grounds 2–4: Obviousness Based on Sheha and Others

For Ground 2, Patent Owner contends that claims 4, 5, 11, 17, 22, 23, 28, and 29 are unpatentable over the combination of Sheha and Ryden. Pet. 2, 27–31. For Ground 3, Patent Owner contends that claims 8, 9, 12, 14, and 25 are unpatentable over the combination of Sheha and Tanaka. *Id.* at 2, 31–38. For Ground 4, Patent Owner contends that claims 15–17 are unpatentable over the combination of Sheha and Ganesh. *Id.* at 2, 39–42. Patent Owner does not offer any specific arguments with respect to Grounds 2–4. Based on the record before us, we are sufficiently persuaded that the Petition shows that claims 4, 5, 11, 17, 22, 23, 28, and 29 are unpatentable over the combination of Sheha and Ryden; that claims 8, 9, 12, 14, and 25 are unpatentable over the combination of Sheha and Tanaka; and that claims 15–17 are unpatentable over the combination of Sheha and Ganesh.

E. Ground 5: Obviousness Based on Randall

Petitioner contends that claims 1–3, 6–10, 13, 14, 18–21, 24–27, and 30 are unpatentable over Randall.

1. Overview of Randall (Ex. 1007)

Randall “relates to a method of enabling a wireless information device to access data services,” where the wireless information device includes

radio telephones and smart phones. Ex. 1007 ¶ 2. A “directory application (which contains a user’s contacts list, and is capable of acting as a directory for any other name/contact data) [and] a location application (which gives a user’s location and includes digital maps) . . . might all be resident on a device.” *Id.* ¶ 9.

A user might choose to subscribe to a service which allows others to track his or her location. Ex. 1007 ¶ 21. The user’s friends or parents who wish to track the user’s location might have applications resident on their devices which allow them to see the user’s current telephone number and address. *Id.* A map application could show friends and parents their position on digital maps and also show the position of the user. *Id.*

An ADS system information distribution architecture includes internet servers hosting extensible databases which can be accessed by the wireless information devices. Ex. 1007 ¶ 29. A database can define which entities can read different fields. *Id.* ¶ 47. For example, Alice can give Bob rights to read only certain fields in her database, such as location information. *Id.* ¶¶ 47, 144. When Bob’s device sends Alice’s ADS number to the server, the server recognizes Bob’s device and allows that device to read Alice’s information held on the database which is specified as being accessible to Bob. *Id.* ¶ 49. Access rights can be associated with individual entities, and can also be associated with groups of entities. *Id.* ¶ 70.

2. Analysis of claim 1

Preamble

The preamble of claim 1 recites a “system comprising.” Petitioner contends, to the extent it is limiting, that Randall discloses a system that

provides access control for a wireless device user to track the location of another wireless device user. Pet. 44.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Sheha teaches the features recited in the preamble of claim 1. Because we determine that Randall teaches the preamble, we need not decide whether the preamble is limiting at this stage.

A first wireless device

Claim 1 recites “a first wireless device, wherein a location of said first wireless device is operable of being determined and provided to a remote system.” Petitioner contends that Randall teaches this limitation in disclosing a location application resident on a wireless information device that obtains location data via GPS, transmits location information to an i-server, and enables authorized people to track the location of the device by polling the server. Pet. 44–47.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Randall teaches the features recited in this limitation of claim 1.

Said location . . . is operable of being requested . . . outside of a call

Claim 1 recites “said location of said first wireless device is operable of being requested by a second wireless device outside of a call for communication between said first wireless device and said second wireless device.” Petitioner contends that Randall teaches this limitation in disclosing a second device requesting the location of a first device by polling a database on a server. Pet. 47–48.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Randall teaches the features recited in this limitation of claim 1.

A permission is operable of being provided

Claim 1 recites “a permission is operable of being provided by said first wireless device for said second wireless device to access location information about said location.” Petitioner contends that Randall teaches this limitation in disclosing a database that includes information about a user’s GPS location which is only accessible to individual entities or groups of entities who are associated with access rights designated by the user. Pet. 48–49.

Patent Owner contends that “Randall does not disclose or suggest the ’418 Patent’s claimed features that the same device that is operable to have its location determined is operable to provide a permission for another specific device to access the location information.” Prelim. Resp. 51. Patent Owner contends that Randall is silent as to how definitions of which entities can read different fields are established. *Id.* at 51–52. Patent Owner contends that granting access rights to a group as taught by Randall does not teach the claimed providing a permission for a wireless device according to Patent Owner’s construction of this term. *Id.* at 52–53.

Randall discloses that “a user can also specify the remote database access rights given to different people or groups,” where the access rights include the right to view the user’s location information. Ex. 1007 ¶¶ 52, 143–144; *see id.* ¶¶ 9, 21, 28–30, 505, 509, 518 (Table 4, “people tracking”). Randall discloses that the user does this with a wireless information device such as a radio telephone, smart phone, or a CDMA mobile radio. *Id.* ¶ 2.

On this record, we are sufficiently persuaded that Randall discloses that the same wireless information device performs the disclosed functions of having its location determined and providing permission for another device to access location information, where the wireless information device “cover[s] any kind of device with one or two way wireless information capabilities and includes without limitation radio telephones, smart phones, communicators, personal computers, computers and application specific devices.” Ex. 1007 ¶ 2. We are sufficiently persuaded, on this record, that Randall teaches that the same wireless information device that is operable to have its location determined is also operable to provide a permission for another specific device to access the location information.

With respect to Patent Owner’s contention that the database that provides group access to location information taught by Randall does not teach the claim term “a permission is operable of being provided by said first wireless device” under Patent Owner’s construction because, according to Patent Owner, a group policy is not a permission for a specific person, we disagree with Patent Owner for the reasons given in our construction of this term and for the reasons given in our analysis of Ground 1. Further, Randall discloses that “a user can also specify the remote database access rights given to different people or groups,” that “[a]ccess rights can be associated with individual entities, and can also be associated with groups of entities,” and that “[s]ome users will be prepared to allow specific people access to more of their data than others,” where “[t]hese specific people or groups of people . . . are referred to as Buddies.” Ex. 1007 ¶¶ 52, 70, 146. Thus, even under Patent Owner’s narrower construction, Randall teaches this limitation.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Randall teaches the features recited in this limitation of claim 1.

Said permission is operable of being stored

Claim 1 recites “said permission is operable of being stored in said remote system, wherein said remote system is located remotely from said first and second wireless devices.” Petitioner contends that Randall teaches this limitation in disclosing a user storing remote database access rights in an i-server. Pet. 50.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Randall teaches the features recited in this limitation of claim 1.

Said location information

Claim 1 recites “said location information about said location is operable of being provided from said remote system to said second wireless device in accordance with said permission outside of said call.” Petitioner contends that Randall teaches this limitation in disclosing a server recognizing a second device, determining the access rights of the second device, and sending authorized information including location information to the second device. Pet. 50–51.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Randall teaches the features recited in this limitation of claim 1.

Wherein said . . . device is operable of providing a first map

Claim 1 recites “wherein said first wireless device is operable of providing a first map provided with respect to said location.” Petitioner

contends that Randall teaches this limitation in disclosing a wireless device providing a map of the device's location. Pet. 51–52.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner has demonstrated that Randall teaches this limitation of claim 1.

Based on the evidence and arguments currently of record, for purposes of institution, we determine that Petitioner demonstrates a reasonable likelihood that independent claim 1 is unpatentable over Randall.

3. Independent claims 18 and 19

Petitioner relies, for the most part, on its contentions with respect to claim 1 for how the combination of Sheha disclose the subject matter of independent claims 18 and 19. *See* Pet. 58–62. Patent Owner relies on the arguments directed to independent claim 1, which we address above in connection with our analysis of claim 1 under Ground 5. *See* Prelim. Resp. 44 (referencing arguments made for claim 1 with respect to claims 18 and 19).

Based on our analysis of claim 1, and review of Petitioner's additional contentions and corresponding evidence directed to claims 18 and 19, we determine that Petitioner demonstrates a reasonable likelihood that independent claims 18 and 19 are unpatentable over Randall.

4. Dependent Claims 2, 3, 6–10, 13, 14, 18–21, 24–27, and 30

Petitioner contends that claims 2, 3, 6–10, 13, 14, 18–21, 24–27, and 30 are unpatentable over Randall. Pet. 52–58, 62. Patent Owner does not offer any specific arguments with respect to these claims. *See* Prelim. Resp. Based on the record before us, we are persuaded that the Petition sufficiently

shows that claims 2, 3, 6–10, 13, 14, 18–21, 24–27, and 30 are unpatentable over Randall.

F. Grounds 6–9: Obviousness Based on Randall and Others

For Ground 6, Petitioner contends that claim 12 is unpatentable over the combination of Randall and De-Vries. Pet. 2, 63–64. For Ground 7, Petitioner contends that claims 3, 10, 15–17, 21, and 27 are unpatentable over the combination of Randall and Wollrab. *Id.* at 2, 64–70. For Ground 8, Petitioner contends that claims 4, 5, 11, 17, 22, 23, 28, and 29 are unpatentable over the combination of Randall and Ryden. *Id.* at 2, 70–74. For Ground 9, Petitioner contends that claims 15–17 are unpatentable over the combination of Randall and Ganesh. *Id.* at 2, 74–75. Patent Owner does not offer any specific arguments with respect to Grounds 6–9. Based on the record before us, we are sufficiently persuaded that the Petition shows that claim 12 is unpatentable over the combination of Randall and De-Vries; that claims 3, 10, 15–17, 21, and 27 are unpatentable over the combination of Randall and Wollrab; and that claims 15–17 are unpatentable over the combination of Randall and Ganesh.

III. CONCLUSION

Based on the arguments presented in the Petition, we conclude that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the '418 patent challenged in the Petition. Accordingly, we institute a trial on all claims and all grounds asserted in the Petition. The Board has not made a final determination under 35 U.S.C. § 318(a) with respect to the patentability of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–30 of the '418 patent is instituted with respect to all 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 '418 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

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Patent 11,122,418 B2

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