

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UBER TECHNOLOGIES, INC.,
Petitioner,

v.

ENOVSYS LLC,
Patent Owner.

IPR2024-00825
Patent 7,199,726 B2

Before THOMAS L. GIANNETTI, MICHELLE N. WORMMEESTER, and
ANDREW L. NALVEN, *Administrative Patent Judges*.

NALVEN, *Administrative Patent Judge*.

DECISION

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

I. INTRODUCTION

Uber Technologies, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1, 2, 8, 12, and 13 of U.S. Patent No. 7,199,726 B2 (Ex. 1001, “the ’726 patent”). Enovsys, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 7, “Pet. Reply”) and Patent Owner filed a Sur-Reply to the Reply (Paper 8, “Sur-Reply”).

We have authority under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). Pursuant to 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . 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 determine that Petitioner has not demonstrated a reasonable likelihood of prevailing in demonstrating the unpatentability of at least one of the challenged claims. Accordingly, we decline to institute an *inter partes* review.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies Uber Technologies, Inc. as the real party in interest. Pet. 2. Patent Owner identifies Enovsys, LLC., as the real party in interest. Paper 5, 1 (Patent Owner’s Mandatory Notice).

B. Related Proceedings

The parties identify the following related cases: *Enovsys LLC v. Uber Technologies, Inc. d/b/a Uber*, 5:23-cv-04549 (N.D. Cal.), and *Enovsys, LLC v. Lyft, Inc.*, Case No. 5:23-cv-05157-EJD (N.D. Cal.). See Pet. 2; Paper 5, 1.

C. The '726 Patent

The '726 patent relates to telecommunication services and systems that convey the location of a mobile unit. Ex. 1001, 1:17–19. The '726 patent describes “a telecommunication system that can provide location information pertaining to other communication targets that are present within a pre-specified geographic boundary.” *Id.* at 3:35–38. A general overview of the system is illustrated in Figure 1 of the '726 patent, reproduced below.

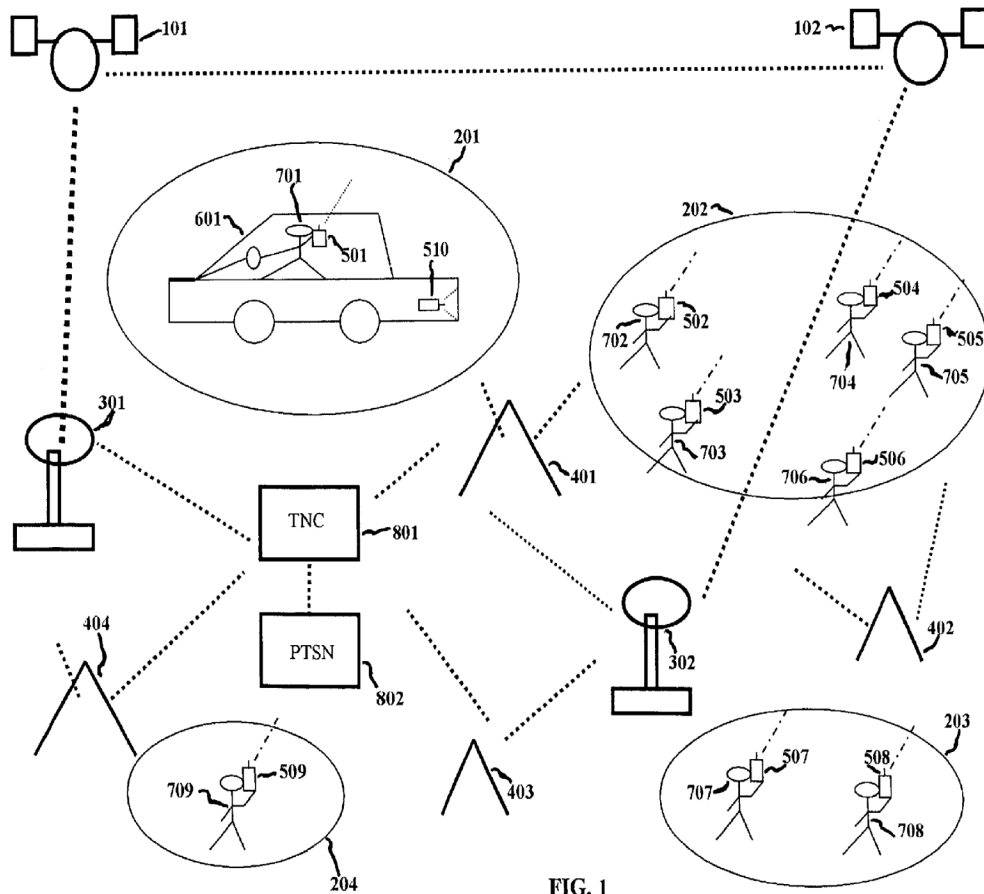


FIG. 1

Figure 1 depicts a network of portable remote units (PRU) 501–510 scattered through a wide geographic area. *Id.* at 4:25–27. Mobile users 701–709 are in possession of PRUs 501–509. *Id.* at 4:27–29. Geographic

regions 201–204 may contain one or more portable mobile users 701–709. *Id.* at 4:29–4:31.

According to the '726 patent, PRU 501 used by a subscriber 701 in moving vehicle 601 can be tracked by clandestine unit 510, which is concealed in moving vehicle 601 by subscriber 704 in another geographic region 202. Ex. 1001, 5:17–24. The '726 patent explains that “[a]s vehicle 601 travels from one location to the next, authorized users will be able to receive location information from PRU 510 whenever they poll for it.” *Id.* at 5:26–29. Noting that “[i]t is of utmost importance that a subscriber in possession of unit 501 should be able to determine it [sic] they are being tracked by another unit,” the '726 patent describes a tracking feature provided in PRU 501 which subscriber 701 can activate at any point in time. *Id.* at 5:31–35. According to the '726 patent, a tracked PRU 501, in tracking mode, “may simply alert a user in possession of the tracked PRU with the location information of any tracking device—PRU 510—that has resided within a pre-specified radius of the tracked PRU, with both units having traveled a minimum distance.” *Id.* at 5:37–42.

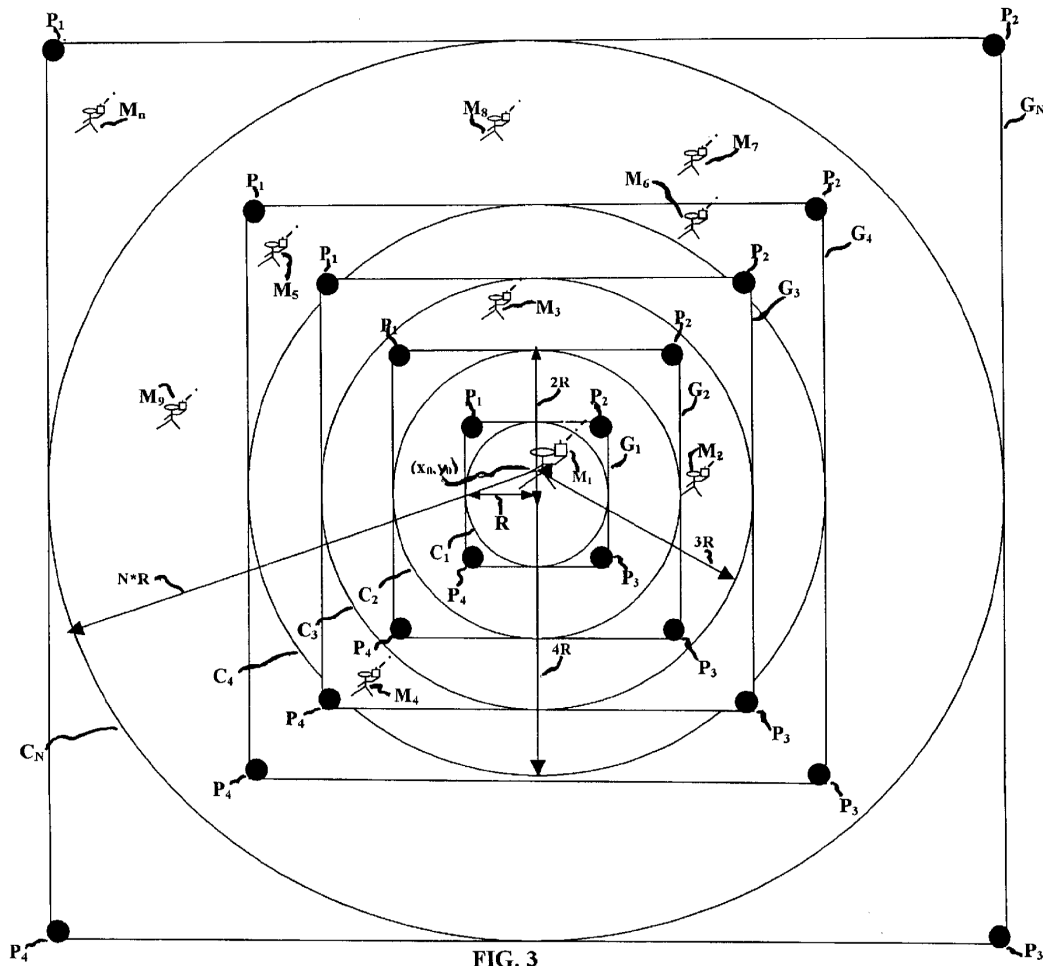
The '726 patent explains that “[i]n tracking mode the geographic location of the tracked unit, . . . 501, is utilized to determine the geographic boundary where a search for possible tracking units 510 could be initiated.” Ex. 1001, 5:48–51. The '726 patent describes that “[a]s the tracked unit 501 is moving, that unit or an appropriate network unit, may page for the location of other communication units within the tracking boundary of the tracked unit to disclose their location.” *Id.* at 5:59–63.

The '726 patent further describes the tracking operation as follows:
At the first time interval, a list could be maintained of all the PRUs

that responded within the specified geographic boundary defined for tracking. At subsequent time intervals, PRUs that were [sic] in the list at the first tracking interval and not responding in later intervals could be eliminated as possible tracking units.

Id. at 6:2–7. According to the '726 patent, “[a]t the end of the tracking period, if there are any units in the tracking list and the minimum tracking distance was covered, such communication units are deemed to be tracking another and are reported to the requested party.” *Id.* at 6:8–11.

The '726 patent further describes disclosing a global location within a prescribed geographic boundary. Ex. 1001, 7:30–33. A PRU at the geographic location picking up a request must determine if it is within that boundary before providing its location to the network. *Id.* Figure 3 of the '726 patent (reproduced below) depicts a geographic location with mobile units M_1 – M_N , wherein the location is divided into cells C_i or grids G_i , also known as regions. *Id.* at 7:33–36.



In Figure 3, “cell C_1 is defined by radius R and its latitude and longitude information is that of mobile user $M_1 (x_0, y_0)$ ” and “[g]rid G_1 is defined by four points P_1, P_2, P_3 and P_4 .” *Id.* at 7:39–41.

As shown in Figure 3, a distressed mobile user M may need to find where another party might exist in that geographic region. *Id.* at 7:47–49. Mobile user M_1 “could initiate a page from their PRU for the closest available PRUs that could be found in that geographic jurisdiction” and “provide its location, latitude and longitude (x_0, y_0) to the closest available ground station serving area C_1 or grid G_1 .” *Id.* at 7:49–53. According to the ’726 patent, “[o]nce a ground station picks up this signal, it sends a page for

all location reporting devices in the specified boundary surrounding mobile unit M_1 . . . to disclose their location.” *Id.* at 7:56–59. The ’726 patent explains that “[s]ubsequent searches will include incrementing the radii information to from C_1 . . . C_N or grid boundary information from G_1 – G_N until a PRU within that geographic boundary responds or system limitations are encountered.” *Id.* at 8:7–11.

In Figure 3, when mobile unit M_1 initiates a search for possible PRUs in its immediate area, the relevant ground control station sends three pages. Ex. 1001, 8:26–28. A first page covers cell C_1 or grid G_1 , and (as no units are available in that area) a second page covers cell C_2 or grid G_2 . *Id.* at 8:28–31. “Once a page is sent out for cell C_3 , PRU, M_2 and M_3 will respond.” *Id.* at 8:32–33. According to the ’726 patent, the ground control station selects the unit closest to M_1 (in this case, M_2) and forwards its location to M_1 . *Id.* at 8:34–37.

D. Illustrative Claim

Petitioner challenges claims 1, 2, 8, 12, and 13 of the ’726 patent, where claims 1, 8, and 12 are independent claims. Claims 1 and 12 are illustrative of the claimed invention and are reproduced below.

1. A communication system comprising:
 - (i) a portable mobile remote unit;
 - (ii) a network of communication units;
 - (iii) the portable mobile remote unit able to communicate with at least a transmitter within the network to establish its geographic location within the system;
 - (iv) means to request for the location information of portable mobile remote units that are in a geographic boundary that is prescribed within the coverage area of said network;

- (v) means to provide the location information of the portable mobile remote unit to the network upon determination that the portable mobile remote unit is within said prescribed geographic boundary requested by the network;
- (vi) means to determine and report to the system that, another portable mobile remote unit has maintained relative proximity to the portable mobile remote over a period of time while in motion.

12. A method for notifying portable mobile remote units within a geographic region in a wireless communication system comprising:

- i) communicating with one or more portable mobile remote unit in a network to establish their geographic location within the system;
- ii) specifying and forwarding to the network, geographic boundary information describing a region within a coverage area of said network where a notification should be sent to one or more of said portable mobile remote units within said region;
- iii) forwarding said notification to portable mobile remote units within said region;
- iv) identifying said notification (iii) at the portable mobile remote unit and verifying whether the portable remote unit exists within said region (iii).

Ex. 1001, 11:55–12:7, 14:4–21.

E. Asserted Challenges to Patentability

Petitioner challenges claims 1, 2, 8, 12, and 13 of the '726 patent as follows. Pet. 26–98.

Claims Challenged	35 U.S.C. § ¹	References/Basis
12, 13	103(a)	Suarez ²
8	103(a)	Suarez, Mezhvinsky ³
8, 12, 13	103(a)	Heedfeld ⁴
1	103(a)	Layson'757, ⁵ Layson'213, ⁶ IllinoisLaw ⁷
2	103(a)	Layson'757, Layson'213, IllinoisLaw, Wang ⁸

In support of its challenge, Petitioner relies on a Declaration of Scott Andrews. Ex. 1002. In its Preliminary Response, Patent Owner relies on the Declaration of Joseph C. McAlexander III. Ex. 2001.

III. DISCUSSION

A. Principles of Law

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103 effective March 16, 2013. Because the '726 patent has a filing date prior to the effective date of the applicable AIA amendment, we refer to the pre-AIA version of §103.

² Suarez et al., U.S. Pat. No. 6,212,393 B1, issued April 3, 2001 (“Suarez,” Ex. 1013).

³ Mezhvinsky, AU 200037767 B3, filed on May 30, 2000, and published August 17, 2000 (“Mezhvinsky,” Ex. 1017).

⁴ Heedfeld, German DE 197 51 741 A1, filed on November 21, 1997, and published May 28, 1998 (“Heedfeld,” Ex. 1018).

⁵ Layson, U.S. Pat. No. 5,731,757, issued March 24, 1998 (“Layson'757,” Ex. 1007).

⁶ Layson et al., U.S. Pat. No. 6,405,213 B1, issued June 11, 2002 (“Layson'213,” Ex. 1008).

⁷ 720 Ill. Comp. Stat. Ann. 5/12-7.3, as amended by 1995 Ill. Legis. Serv. P.A. 89-377 (H.B. 1792) (“IllinoisLaw,” Ex. 1010).

⁸ Wang et al., US Pat. No. 5,365,451, issued Nov. 15, 1994 (“Wang,” Ex. 1009).

unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to the patent owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

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

We consider Petitioner’s asserted challenges with the above-noted principles in mind.

B. Claim Construction

In an *inter partes* review proceeding, we construe a claim of a patent “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).” 37 C.F.R. § 42.100(b). That standard involves construing claims in accordance with the ordinary

⁹ Neither party presents evidence of secondary considerations.

and customary meaning of such claims as would have been understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

The use of the word “means” in a claim element creates a rebuttable presumption that 35 U.S.C. § 112 ¶ 6 applies. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc in relevant part). Construing a means-plus-function claim term is a two-step process. We must first identify the claimed function. Then, we must determine what structure, if any, disclosed in the specification corresponds to the claimed function. *Id.* at 1351 (citation omitted).

1. *“forward said notification to portable mobile remote units within said region”*

Claim 8 recites a “means to forward said notification to portable mobile remote units within said region.” Ex. 1001, 13:23–24. Claim 12 recites the substantially similar step of “forwarding said notification to portable mobile remote units within said region.” *Id.* at 14:4–21.

Petitioner asserts that claim 8 recites the function to “forward said notification to portable mobile remote units within said region.” Pet. 10. Petitioner identifies the ’726 patent’s disclosure of a control unit/center that is programmed to request the location of communication targets within a specific distance or boundary as the requisite structure to perform the recited function. *Id.* More specifically, Petitioner refers to the ’726 patent’s teaching of a “page,” “poll,” or “query” as relaying mobile information to and from the portable mobile remote units of the network. *Id.* (citing Ex. 1001, 2:29–31, 3:52–54, 3:39–41, 7:25–27).

Petitioner further asserts that “[a] POSITA would have understood that Element 12[C] does not require that the notification is forwarded to the PRUs only within said region and specifically preclude also sending messages to units that may be outside the region[;] otherwise Element 12[D]’s step of verifying whether the PRUs exists within said region would be unnecessary.”¹⁰ Pet. 35 n.8.

Patent Owner disagrees and asserts a narrower construction requiring “a control unit programmed to control sending the notification *to only one or more* portable mobile remote units *currently located within the identified area*, and equivalents thereof.” Prelim. Resp. 11 (citing Ex. 1001, Fig. 7, 8:57–9:12) (emphasis added). Patent Owner, relying on the declaration of Mr. McAlexander, asserts that its construction is consistent with the ’726 patent disclosure describing a control unit programmed to forward a notification to PRUs present in a specific geographic boundary of the system to reveal their location. *Id.* (citing Ex. 2001 ¶ 55).

We agree with Patent Owner as its proposed construction is consistent with both the claims and ’726 patent Specification. For example, Figure 7 of the ’726 patent, depicted below, shows “how a search for the location of mobile communication units in a wider than normal pre-specified geographic boundary is carried out.” Ex. 1001, 4:17–19.

¹⁰ Although Petitioner refers specifically to claim 12, we consider this argument as also applicable to the substantially similar limitation recited in claim 8.

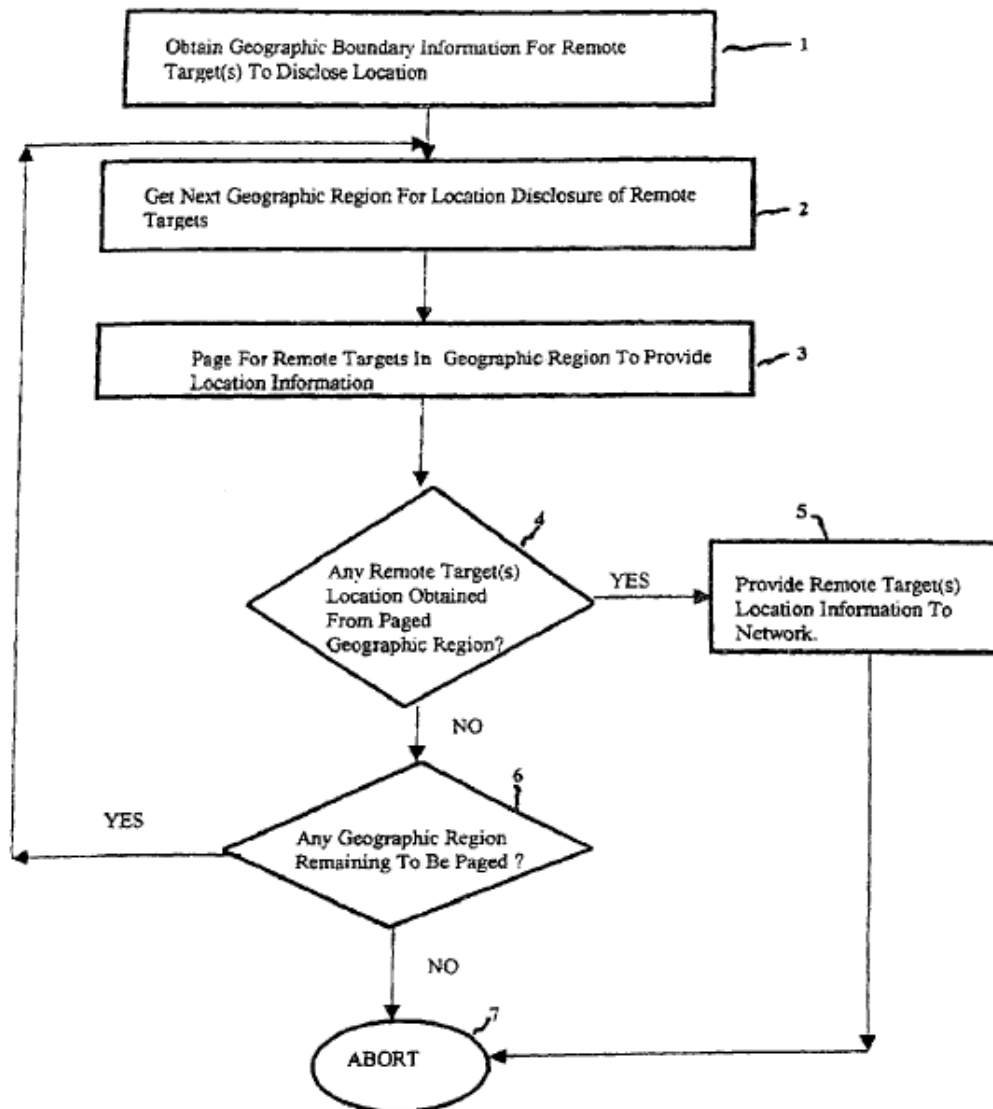


FIG. 7

Step 1 of Figure 7 begins by obtaining the geographic information of the area to search for possible remote targets. *Id.* at 8:57–59. In step 2, the next geographic region where a possible search for a PRU is estimated. *Id.* at 8:64–66. In step 3, a page is sent out to that geographic region for remote units in the region to reveal their location. *Id.* at 9:2–4. In steps 4 and 5, if remote units are identified in the paged area, that information is

forwarded to the network and the process continues to step 7 where the process is aborted. *Id.* at 9:4–6. Step 6 is performed if no units are identified in the paged area. *Id.* at 9:6–9. There, a check is done to establish if there are any remaining cells or grids higher up in the chain to be searched, and if so, the process returns to step 2 to search additional geographic areas. *Id.* at 9:9–12. The iterative process described in Figure 7 is consistent with Patent Owner’s proposed construction requiring forwarding a notification to only one or more PRUs currently located in a specific geographic boundary. Ex. 2001 ¶ 55; *see also* Ex. 1001, 8:32–54 (describing a grid search technique that may be implemented by the process of Figure 7).

The portions of the ’726 patent cited by Petitioner are also consistent with Patent Owner’s proposed construction in that they do not describe forwarding a notification to PRUs outside of the specific geographic area. Specifically, Petitioner directs us to the disclosure of a “page,” “poll,” or “query” as relaying mobile information to and from the portable mobile remote units of the network. Pet. 10 (citing Ex. 1001, 2:29–31, 3:52–54, 3:39–41, 7:25–27). Each of the type of requests referred to by Petitioner is forwarded to a specific geographic region rather than forwarded to PRUs that may be outside the specified geographic region. For example, the ’726 patent teaches that “[p]ages may . . . be *sent to specific areas* in order to obtain the location of portable remote units in that geographic area.” Ex. 1001, 2:29–31 (emphasis added). Further, the ’726 patent describes polling by stating that “a communication source may poll directly for the location information of targets *in a specified geographic boundary*.” *Id.* at 3:52–54 (emphasis added). Finally, the ’726 patent describes “the network

may simply split the wider area into sub regions and recursively query for the location of PRUs, starting in sub-regions that are close to the origin before extending to geographic regions that are further away.” *Id.* at 7:25–29. Each of these descriptions is consistent with Patent Owner’s assertion that a POSA would understand that “[t]he minimum [necessary] structure for performing the recited function is ‘a control unit programmed to control sending the notification *to only one or more* portable mobile remote units *currently located within the identified area.*’” Prelim. Resp. 11 (citing Ex. 2001 ¶ 55) (emphasis added).

We are further not persuaded by Petitioner’s argument that forwarding notifications to the PRUs only within a specified geographic region renders element 12[D]’s step of verifying whether the PRUs exists within said region unnecessary. Pet. 35 n.8. Rather, we credit Mr. McAlexander who testifies that forwarding notifications to individually pollable geographic boundaries “does not obviate the need for the PRU to identify that the notification has been received or verify its location within the individual geographic boundary before responding.” Ex. 2001 ¶ 155.

Patent Owner’s proposed construction is also consistent with the recited elements of claim 8. Specifically, claim 8 recites specifying a region to send a notification to by reciting a “means for a wireless consumer to specify and forward to the network, *geographic boundary information describing a region* within a coverage area of said network *where a notification should be sent.*” Ex. 1001, 13:17–20 (emphasis added). Claim 8 then recites “forward[ing] said notification to portable mobile remote units *within said region.*” *Id.* at 13:23–24. We are persuaded that the explicitly recited specification of a region “*where a notification should be sent*” is

consistent with Patent Owner’s proposed construction requiring sending the notification to only one or more portable mobile remote units currently located *within the identified area* rather than sending the notification to areas outside of the specified region. Prelim. Resp. 11.

Accordingly, on this record, we construe claim 8’s “means to forward said notification to portable mobile remote units within said region” as forwarding the notification to only one or more portable mobile remote units currently located within the identified area. *Id.* (citing Ex. 1001, Fig. 7, 8:57–9:12). Because the terms are substantially similar, we construe claim 12’s step of forwarding said notification to portable mobile remote units within said region in the same manner as claim 8.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). After reviewing the record, at this stage, we determine that no other terms require express construction for purposes of this Decision.

C. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art (“POSITA”) would have had “a bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and at least two years of experience in the research, design, development, and/or testing of GPS and related location tracking techniques, or the equivalent.” Pet. 8 (citing Ex. 1002 ¶¶ 28–30). Patent Owner does not dispute Petitioner’s proffered definition as to the level of ordinary skill in the art. Prelim. Resp. 6.

For purposes of this Decision, we adopt Petitioner’s assessment, which is consistent with the level of skill reflected in the Specification and asserted prior art.

D. Ground 1: Alleged Obviousness over Suarez

Petitioner asserts that claims 12 and 13 of the ’726 patent would have been obvious over Suarez. Pet. 26–37. Patent Owner disagrees. Prelim. Resp. 25–31. For the reasons explained below, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its asserted challenge to claims 12 and 13.

Before addressing the parties’ arguments, we provide an overview of the Suarez reference.

1. Overview of Suarez

Suarez is titled “Method and Apparatus for Communication within a Vehicle Dispatch System.” Ex. 1013, (54). Suarez relates to communication between a dispatch center and a plurality of wireless communication devices within a vehicle dispatch system. *Id.* at Abstract.

Figure 1 of Suarez, reproduced below, shows a block diagram of a vehicle dispatch system. Ex. 1013, 2:38.

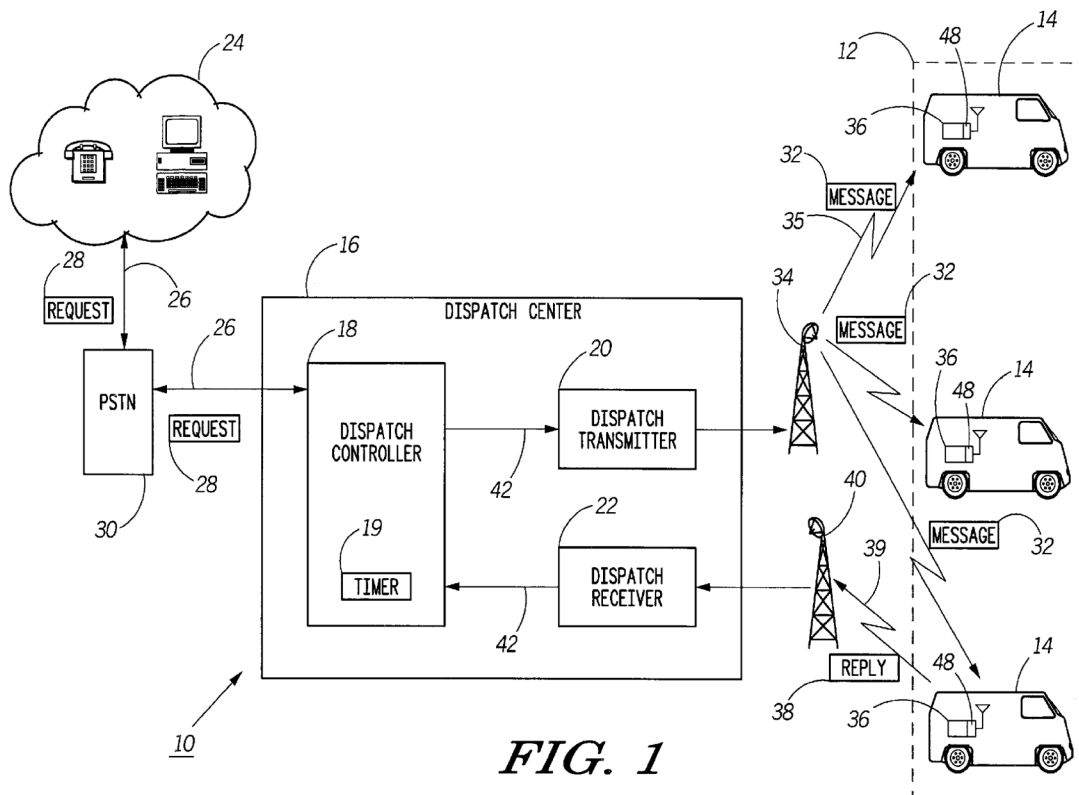


Figure 1 depicts vehicle dispatch system 10 for management of fleet 12 of vehicles 14, wherein message input device 24, such as a telephone or computer terminal, may communicate with dispatch center 16 via, for example, a conventional public switched telephone network (PSTN), radio frequency (RF) channels, satellite links, or Internet. *Id.* at 2:66–3:10. In dispatch center 16, “[t]he dispatch controller 18 encodes inbound requests for dispatch 28 into outbound assignment messages 32, and decodes inbound replies 38 from the vehicles 14 for matching of a request for dispatch 28 with a vehicle 14 that affirmatively replies.” *Id.* at 3:21–25. According to Suarez, dispatch controller 18 also “schedules the assignment message 32 for transmission by the dispatch transmitter 20, via a transmit antenna 34, to each vehicle 14.” *Id.* at 3:27–29. Each vehicle has “a wireless

communication device 36 capable of receiving and processing the assignment messages 32.” *Id.* at 3:31–33.

Suarez describes that a vehicle’s wireless communication device 36 includes an assignment manager programmed to include a criteria parameter for comparison of the location parameter of assignment message 32 with a current location stored in a memory. Ex. 1013, 5:7–10, Fig. 2. According to Suarez, “[t]he criteria parameter . . . is a pre-set metric for filtering the assignment message 32 received by the wireless communication device 36 to be seen only by the vehicles 14 within the fleet 12 that meet the specified criteria.” *Id.* at 5:14–17. For example, the criteria parameter is a perimeter surrounding the assignment location established at a radius from the assignment location (*see id.* at 5:39–42, Fig. 4); the driving distance from the assignment location (*see id.* at 5:55–56, Fig. 5); or the vehicle travel time, i.e., the difference between a current time and an estimated arrival time (*see id.* at 6:15–17, Fig. 6).

2. Analysis of Claims 12 and 13

Claim 12 recites, *inter alia*, “iii) forwarding said notification to portable mobile remote units within said region.” Ex. 1001, 14:16–17. For this claim element identified by Petitioner as element 12[C], Petitioner asserts that Suarez discloses forwarding a notification to PRUs within the region by disclosing a dispatch controller 18 encoding requests from input device 24 into outbound assignment messages 32, which are then forwarded to the wireless communication devices of vehicles 14. Pet. 34–35 (citing Ex. 1013, 3:21–24, 3:43–46, 5:14–17, 5:36–40, 6:9–14, 9:65–10:1; Ex. 1002 ¶¶ 172–173).

Petitioner asserts that Suarez discloses a notification forwarded to PRUs within a region. *Id.* at 34. For example, Petitioner contends that “dispatch controller 18 encodes inbound requests from input device 24 into outbound assignment messages 32, which are then forwarded to the wireless communication devices of vehicles 14.” *Id.* (citing Ex. 1013, 3:21–24). Petitioner contends that assignment message 32 includes a parameter 50 and criteria 62 where “[c]riteria parameter 62 may be a ‘perimeter 68 surrounding the assignment location 66 established at a radius 70 from the assignment location 66.’” *Id.* (citing Ex. 1013, 5:36–40, 9:65–10:1). Petitioner asserts that the criteria parameter “is a filter used so that the assignment message is ‘seen *only* by the vehicles . . . that meet the specified criteria.’” *Id.* (citing Ex. 1013, 5:14–17). Petitioner then argues that “[i]n order to do this, the dispatch controller would have used the wireless communication device’s specific address to transmit the assignment message ‘only to the addressed wireless communication device 36.’” *Id.* (citing Ex. 1013, 3:43–46; Ex. 1002 ¶¶ 172–173). In this way, Petitioner asserts that Suarez teaches “sending a notification only to those vehicles that meet the specified location criteria, such that the messages are received and seen only by that specific subset of vehicles.” *Id.* at 35 n.8 (citing Ex. 1013, 5:14–17). Finally, Petitioner contends that a POSITA would have been motivated to transmit the assignment message only to the addressed wireless communication device 36 to prevent unnecessary overload and processing and to prevent drivers from replying to assignment messages outside their range. *Id.* at 34–35 (citing Ex. 1013, 6:9–14).

Patent Owner disagrees and argues that Suarez discloses sending the assignment message, including the location parameter, to all vehicles in the

fleet. Prelim. Resp. 30 (citing Ex. 2001 ¶¶ 115–118). Patent Owner argues that because the assignment message is sent to all vehicles, Suarez fails to limit transmission to only those vehicles that meet the location parameter. *Id.*

As we discuss in our claim construction analysis above, on this record, we construe “forwarding said notification to portable mobile remote units within said region” as requiring forwarding the notification to only one or more portable mobile remote units currently located within the identified area. *See* Section III.B.1.

On this record, we agree with Patent Owner that Suarez fails to disclose “forwarding said notification to portable mobile remote units within said region,” as we construe the term. We agree with Patent Owner that Suarez fails to limit the transmission of the notification to a particular region. Prelim. Resp. 30 (citing Ex. 2001 ¶ 115). Rather, as Mr. McAlexander testifies, Suarez discloses an assignment message “is sent to all vehicles of the network, whether they meet the location parameter or not.” Ex. 2001 ¶ 108 (citing Ex. 1013, Abstract, 3:20–25, 7:19–26, 10:21–25). Each vehicle receives the assignment message, but only those vehicles that meet the location parameter alert the driver. Prelim. Resp. 29 (citing Ex. 1013, 8:44–51, 10:55–66; Ex. 2001 ¶¶ 109–114). Petitioner’s expert, Mr. Andrews, similarly states that “Suarez’s dispatch controller receives a ‘request for dispatch’ and transmits an assignment message *to a fleet of vehicles* so that each available vehicle replies to the assignment message.” Ex. 1002 ¶ 177 (emphasis added).

Petitioner, supported by the declaration testimony of Mr. Andrews, further contends that Suarez’s disclosure of a specific address for a device

suggests the transmission of a notification to a limited number of vehicles. Pet. 34 (citing Ex. 1013, 3:43–46, 5:14–17; Ex. 1002 ¶¶ 172–173), 35 n.8. We are not persuaded that Petitioner adequately supports this assertion. Suarez states that “[t]he criteria parameter 62 is a pre-set metric for filter the assignment message 32 received by the wireless communication device 36 to be seen only by the vehicles 14 within the fleet 12 that meet the specified criteria.” Ex. 1013, 5:14–17. Based on the assignment message being “seen *only* by the vehicles . . . that meet the specified criteria,” Petitioner contends that “the dispatch controller would have used the wireless communication device’s specific address to transmit the assignment message ‘only to the addressed wireless communication device 36.’” Pet. 34 (citing Ex. 1013, 3:43–46; Ex. 1002 ¶¶ 172–173). Mr. Andrews testifies that “a POSITA would have understood that the dispatch controller thus can select which vehicles to send the assignment message in view of Suarez’s teaching that the criteria parameter is a filter used so that the assignment message is ‘seen only by the vehicles within the fleet 12 that meet the specified criteria.’” Ex. 1002 ¶ 172 (citing Ex. 1013, 5:14–17).

In response, Patent Owner, supported by the declaration testimony of Mr. McAlexander, argues that Suarez’s discussion of the criteria parameter “reiterate[s] that every vehicle in the fleet receives the notification but only those matching the search criteria will display the notification.” Ex. 2001 ¶ 112 (citing Ex. 1013, 4:19–30, 4:39–55, 5:14–17). Further, Mr. McAlexander testifies that Suarez’s single statement regarding a device specific address does not suggest forwarding a notification to less than all vehicles in the fleet. *Id.* ¶ 113. Rather, according to Mr. McAlexander, a POSITA “would understand, all this is saying is that when a notification is

sent to each vehicle in the fleet, [the notification] is sent individually to all units in the fleet.” *Id.*

On this point we again agree with Patent Owner. Although we acknowledge that Suarez’s disclosure of a PRU having an individual address may suggest the functionality to select the vehicles to which a message is forwarded, this functionality by itself does not teach or suggest forwarding said notification to *a specified geographic region*. Prelim. Resp. 30 (citing Ex. 2001 ¶¶ 115–118). Petitioner does not identify any disclosure of Suarez suggesting the use of a PRU individual address to target a specific region. *See* Pet. 34–35.

Petitioner similarly does not adequately explain why using Suarez’s criteria parameter to provide that the assignment message is “seen only by the vehicles . . . that meet the specified criteria,” requires using “the wireless communication device’s specific address to transmit the assignment message ‘only to the addressed wireless communication device 36.’” *Id.* at 34 (citing Ex. 1013, 5:14–17, 3:43–46; Ex. 1002 ¶¶ 172–173). Petitioner’s assertion implies, without adequate explanation, a connection between the device specific address and the criteria parameter. However, Suarez discloses otherwise stating that “by placing the decision within the vehicle, the dispatch center is alleviated of the task of tracking each vehicle in the fleet, greatly simplifying the operation of the dispatch center and at the same time reducing traffic congestion on the communication channels.” Ex. 1013, 5:29–35. Hence, Suarez’s dispatch center does not track each vehicle and thus would not know the geographic location of a vehicle. Without this geographic information, Suarez could not use the PRU specific address to forward a notification to vehicles that meet the specified criteria.

Based on the foregoing, on this record, we are not persuaded that Petitioner has met its burden to demonstrate that Suarez teaches or suggests forwarding said notification to PRUs within said region. Accordingly, we determine that the Petition fails to show that there is a reasonable likelihood that it would prevail in establishing unpatentability of claim 12 in view of Suarez. Petitioner's additional contentions regarding dependent claim 13 do not cure the deficiencies regarding claim 12, and fail for the same reasons.

E. Ground 2: Alleged Obviousness over Suarez and Mezhvinsky

Petitioner asserts that claim 8 of the '726 patent would have been obvious over Suarez and Mezhvinsky. Pet. 38–49. Patent Owner disagrees. Prelim. Resp. 31–36. For the reasons explained below, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its asserted challenge to claim 8.

Before addressing the parties' arguments, we provide an overview of the Mezhvinsky reference.

1. Overview of Mezhvinsky

Mezhvinsky is directed to a method to allow an “end user to select a desired mobile service provider based primarily on their proximity to that end user at the time the end user requires that service.” Ex. 1017, 2:1–4. In particular, Mezhvinsky describes its system as allowing an end user to request a mobile service from a mobile service provider such as a chauffeur, courier, taxi, plumber, or electrician. *Id.* at 2:11–20.

In Mezhvinsky's system, the end user uses a cellular telephone or personal digital assistant that allows for data input and display. *Id.* at 13:22–25. The end user's device will show a predetermined area around which the end user is located. *Id.* at 10:4–5. The end user's location is

displayed in the center of the display area, and the user may increase or decrease the actual displayed area. *Id.* at 10:11–24. The end user may then “select a mobile service provider based on the geographical location of the mobile service provider relative to that end user.” *Id.* at 3:30–4:2.

2. Analysis of Claim 8

Claim 8 recites, *inter alia*, a “means to forward said notification to portable mobile remote units within said region.” Ex. 1001, 13:23–24. For this claim element identified by Petitioner as limitation 8[D], Petitioner asserts that Suarez discloses a dispatch controller forwards an assignment message 32 to PRUs within the region of a criteria parameter 62. Pet. 46 (citing Ex. 1013, 3:21–24, 5:36–40; Ex. 1002 ¶ 193). Petitioner asserts that the criteria parameter establishes a perimeter surrounding the assignment location. *Id.* (citing Ex. 1013, 5:36–40). Petitioner contends that “[d]ispatch controller 18 transmits assignment message 32 (equivalent to a page, poll, or query) to the vehicles within the perimeter surrounding the assignment location.” *Id.* Petitioner asserts that Suarez’s assignment message is “a page, poll, or query because it is a notification sent to the vehicles in the same way described by the ’726 Patent.” *Id.* at 46–47 (citing Ex. 1001, 2:29–31, 3:52–54, 3:39–41).

As in Ground 1, discussed above, Patent Owner argues that “*Suarez* can send messages to any vehicle in the fleet but does not disclose a mechanism to send a notification to portable remote units in a given geographic boundary or teach how to do so.” Prelim. Resp. 35–36 (citing Ex. 2001 ¶ 137). More specifically, Patent Owner argues that Suarez’s disclosure of forwarding a message to a specific vehicle or to every vehicle is not the same as forwarding messages to a specified region. *Id.* at 36

(citing Ex. 2001 ¶ 138). Further, although Petitioner does not rely on Mezhvinsky as teaching the claimed forwarding, Patent Owner further argues that Mezhvinsky allows a user to specify a display area on their screen and select a specific mobile service provider to message but that Mezhvinsky does not disclose forwarding a notification to mobile service providers based on a geographic area. *Id.* at 35–36 (citing Ex. 2001 ¶ 137).

As we discuss in our claim construction analysis above, on this record, we construe “forwarding said notification to portable mobile remote units within said region” as requiring forwarding the notification to only one or more portable mobile remote units currently located within the identified area. *See* Section III.B.1.

On this record, for the same reasons as we explain above, we agree with Patent Owner that Petitioner fails to demonstrate that the proposed combination of Suarez and Mezhvinsky discloses a “means to forward said notification to portable mobile remote units within said region,” as we construe the term. *See* Section III.B.1. Accordingly, we determine that the Petition fails to show that there is a reasonable likelihood that it would prevail in establishing unpatentability of claim 8 in view of Suarez and Mezhvinsky.

F. Ground 3: Alleged Obviousness over Heedfeld

Petitioner asserts that claims 8, 12, and 13 of the ’726 patent would have been obvious over Heedfeld. Pet. 50–65. Patent Owner disagrees. Prelim. Resp. 37–46. For the reasons explained below, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing as to claims 8, 12, and 13.

Before addressing the parties' arguments, we provide an overview of the Heedfeld reference.

1. Overview of Heedfeld

Heedfeld relates to a method for dispatching a fleet of mobile units. Ex. 1018, 1:1–2. Heedfeld discloses a control center in communication with a fleet of mobile units via a radio data transmission network. *Id.* at 4:39–41. Heedfeld describes its method being used by “cab companies, courier services and similar companies and is intended to distribute orders, in which the mobile units (e.g. vehicles) have to travel to a specific destination, to the units in the fleet in such a way that the travel distances and times are minimized.” *Id.* at 1:5–10.

Heedfeld teaches that its control center receives an order to send a vehicle of the fleet to a specific destination. *Id.* at 4:58–60. The control center then defines a selected area in the vicinity of the destination. *Id.* at 4:59–62. For example, the selected area may be a rectangle defined by coordinates of two corner points. *Id.* at 4:65–69. After determining a selected area, Heedfeld discloses the control center sends coordinate data to all vehicles. *Id.* at 1:23–26, 2:15–16, 5:4–12. Each vehicle receives and compares the coordinate data with its own position. *Id.* at 2:16–19. Each vehicle reports its position to the control center if it determines that its position is within the selected area. *Id.* Because only the vehicles within the selected area report to the control center, the control center only receives position data from a relatively small number of vehicles that are close to the destination. *Id.* at 2:31–35. Heedfeld explains that “[b]ased on the relatively small amount of position data, the vehicle that is best positioned in relation to the destination can be selected at the control center with little processing

effort.” *Id.* at 2:38–42. Following the selection, the driver of the vehicle receives the order to drive to the destination via a radio data display. *Id.* at 2:42–44.

2. Analysis of Claims 8, 12, and 13

Claim 8 recites, *inter alia*, “means to forward said notification to portable mobile remote units within said region.” Ex. 1001, 13:23–24. For this claim element identified by Petitioner as limitation 8[D], Petitioner contends that Heedfeld discloses control center 16 forwards a request with coordinate data to the terminal devices within the fleet of vehicles. Pet. 63 (citing Ex. 1018, 2:14–15). Petitioner further asserts that Heedfeld’s control center sends a request to the mobile units in the search region. *Id.* at 64. According to Petitioner, Heedfeld’s “request sent to the mobile units” “is a page, poll, or query because it is a notification that the terminal devices should respond with ‘a message’ that includes the vehicle’s current vehicle position.” *Id.* (citing Ex. 1018, 5:16–21). Petitioner contends that the request “is sent to the terminal devices of the fleet and only the terminal devices within the selected area report their position to the control center.” *Id.* (citing Ex. 1018, 2:31–38; Ex. 1002 ¶ 220).

Patent Owner argues that Heedfeld does not “forward the notification to mobile remote units within the specified region and does not break its network into individually pollable regions for the locations of PRUs within that region, nor does it have any means of sending a notification to the PRU within such a region.” Prelim. Resp. 45. More specifically, Patent Owner argues that Heedfeld’s specified area “is only a search area, not one where the notification is sent.” *Id.* at 45–46 (citing Ex. 2001 ¶¶ 163–164).

As we discuss in our claim construction analysis above, on this record, we construe “forwarding said notification to portable mobile remote units within said region” as requiring forwarding the notification to only one or more portable mobile remote units currently located within the identified area. *See* Section III.B.1.

Based on this claim construction, we determine that Petitioner fails to demonstrate that Heedfeld discloses the recited forwarding. Petitioner contends that “Heedfeld’s mobile unit functioning as control center 16 (teal) forwards a request with the coordinate data (pink, the claimed notification) to the terminal devices *within the fleet of vehicles* (orange, the claimed PRUs).” Pet. 63 (citing Ex. 1018, 2:14–15) (emphasis added). Petitioner provides annotated Figure 2 of Heedfeld, reproduced below.

Fig. 2

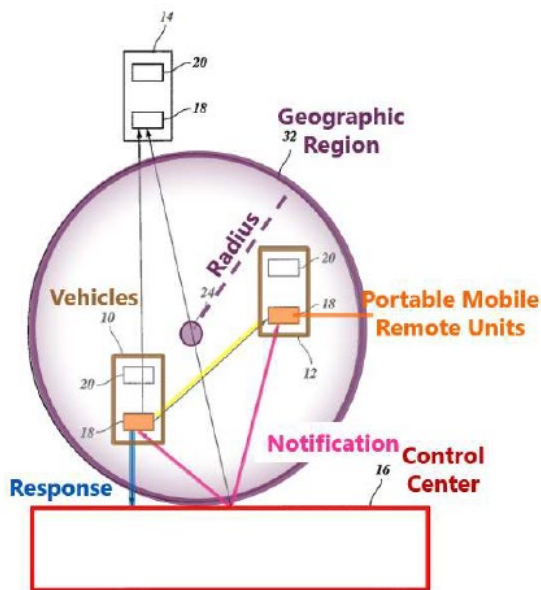
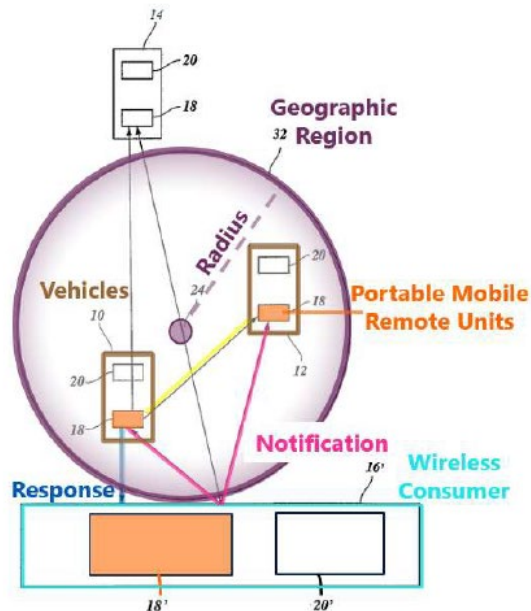


Fig. 2'



Heedfeld’s Figure 2 depicts a selected area 32 with a certain radius around the target location 24. Ex. 1018, 6:1–2. Heedfeld explains that “[t]he central unit 16 specifies the selected area by indicating the coordinates

of the target location 24 and the radius of the circle.” *Id.* at 6:2–4. “The units 10, 12 and 14 then check their own position using the GPS system (not shown in Fig. 2) and calculate their distance to the target location 24.” *Id.* at 6:4–7. Based on Heedfeld’s Figure 2, Petitioner asserts that “Heedfeld’s mobile unit control center performs the recited function by sending a request to the mobile units in the search region.” Pet. 64.

However, we agree with Patent Owner that Heedfeld does not teach or suggest forwarding a notification to a specified region. Prelim. Resp. 45–46. Rather, Heedfeld unambiguously discloses forwarding a notification to all vehicles in the fleet. Specifically, Heedfeld states that “the control center sends coordinate data specifying a selected area *to all units*.” Ex. 1018, 2:14–15 (emphasis added). Heedfeld further discloses “[t]he control center 16 . . . transmits a request on a channel of the radio data network on which the terminal devices 18 *of all vehicles in the fleet receive*.” Ex. 1018, 5:4–6 (emphasis added). Petitioner’s annotated Figure 2 presents a snapshot depicting the vehicles 10 and 12 within a specific area. Ex. 1018, 6:10–13. However, this depiction does not reflect that “[f]or the majority of the vehicles in the fleet, represented by vehicle 14 in the example shown, the check shows that the vehicle is outside the selected area 26.” Prelim. Resp. 45 n.15 (quoting Ex. 1018, 5:12–14). Put another way, Figure 2 does not depict the remainder of the vehicles in the fleet that received the notification, but are outside of the selected area.

Based on the foregoing, on this record, we are not persuaded that Petitioner has met its burden to demonstrate that Heedfeld teaches or suggests forwarding a notification to a specified region as claimed. Accordingly, we determine that the Petition fails to show that there is a

reasonable likelihood that it would prevail in establishing unpatentability of claim 8.

Petitioner and Patent Owner’s contentions regarding claims 12 and 13 are substantially similar to claim 8. *See* Pet. 50–58; Prelim. Resp. 37–42. Accordingly, for the same reasons we explain above, we determine that the Petition fails to show that there is a reasonable likelihood that it would prevail in establishing unpatentability of claims 12 and 13.

G. Ground 4: Alleged Obviousness over Layson ’757, Layson ’213, and IllinoisLaw

Petitioner asserts that claim 1 of the ’726 patent would have been obvious over the combination of Layson ’757, Layson ’213, and IllinoisLaw. Pet. 66–92. Patent Owner disagrees. Prelim. Resp. 46–63. For the reasons explained below, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its asserted challenge to claim 1.

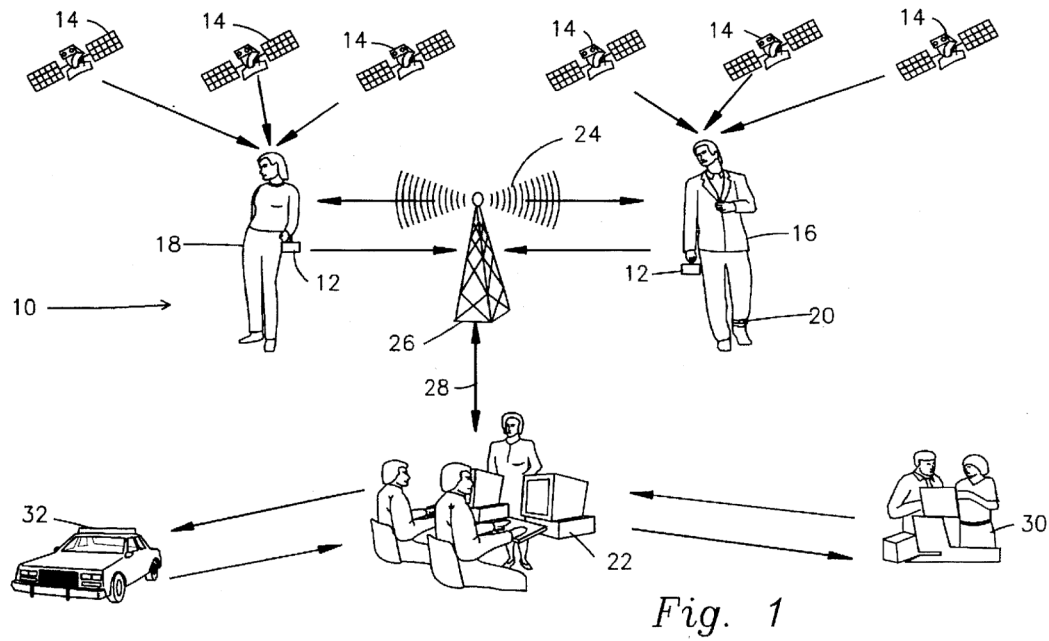
Before addressing the parties’ arguments, we provide an overview of the Layson ’757 and Layson ’213.¹¹

1. Overview of Layson ’757

Layson ’757 is titled “Portable Tracking Apparatus for Continuous Position Determination of Criminal Offenders and Victims.” Ex. 1007, (54).

¹¹ Petitioner asserts that “to the extent that Patent Owner or the Board adopts a construction that does not require a ‘minimum distance’ as part of the algorithm that performs the recited function, then Claim 1 is rendered obvious by the Layson ’757- Layson ’213 combination without the need to rely on IllinoisLaw.” Pet. 91 n.11. As we note above (*see* § III.B.1), we determine that it is not necessary to construe limitation 1[F] for purposes of this Decision. However, we note that our analysis herein is not based on claims 1 or 2 requiring a “minimum distance,” and thus we do not consider IllinoisLaw. *Id.*

Layson'757 describes a portable tracking apparatus for continuous location determination of a subject that communicates with a body-worn, non-removable, tamper resistant transceiver and a central data-base system. *Id.* at Abstract. Figure 1 of Layson'757, which is reproduced below, depicts a system incorporating the portable tracking apparatus. *Id.* at 2:27–28.



As shown in Figure 1, system 10 incorporates “a portable tracking device 12 which receives communication signals from a global position satellite (GPS) 14 to determine the location of the subject (offender 16 or victim 18).” *Id.* at 2:46–49. To continuously report location of the offender 16, “the offender 16 is fitted with a body-worn device 20 which is non-removable by the offender 16 and provides tamper detection to generate alarms should the offender 16 attempt to remove the body-worn device 20.” *Id.* at 2:50–54. To continuously report location of the victim 18, “the victim 18 can be provided a portable tracking device 12.” *Id.* at 2:54–56.

Layson'757 explains that “[t]he communication from the subject’s portable tracking device 12 is routed to the central data-base system 22

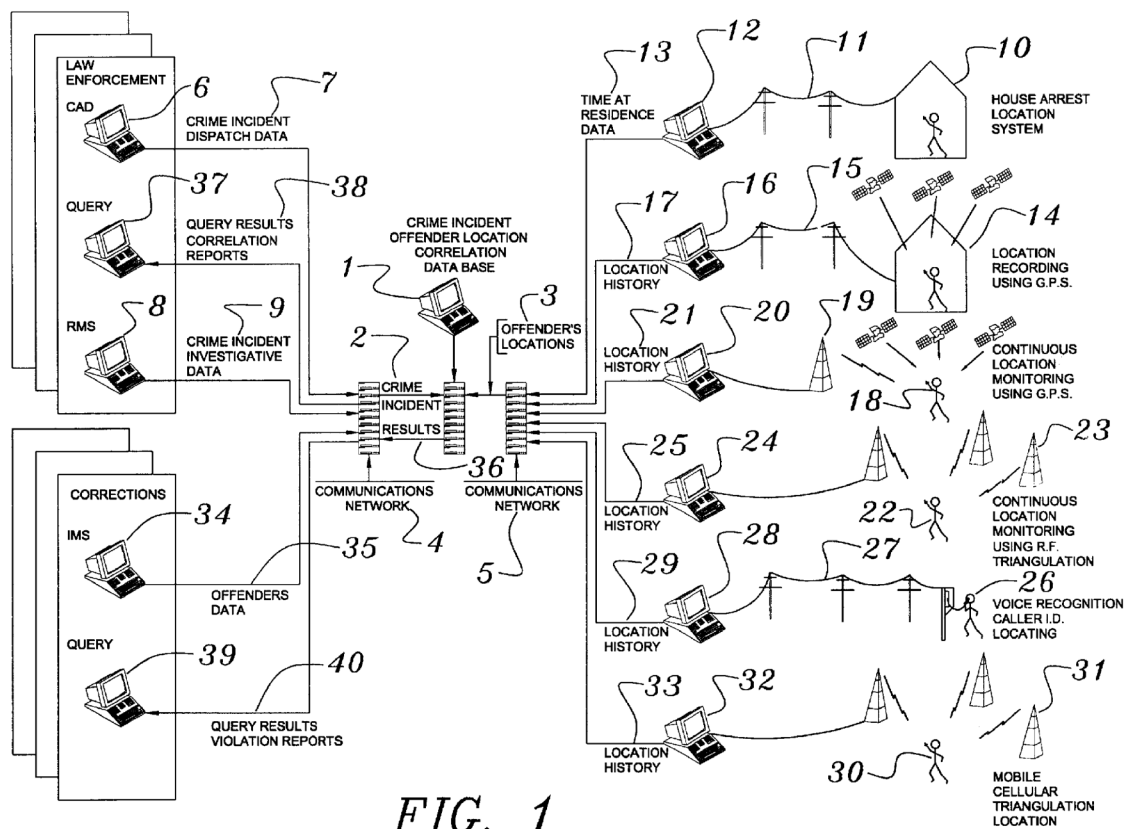
where response decisions for notification to parole and probation 30, victims 18 and law enforcement 32 are made based on schedule rules and location constraints provided by the supervising agency such as parole and probation 30.” Ex. 1007, 3:3–8. According to Layson’757, “schedule rules are driven by time of day and day of week as to where a subject’s location is allowed or not allowed and describe the response actions taken by both the portable tracking apparatus and the central data-base system,” and “location constraints define locations and a distance radius which constitute a buffer area around a location.” *Id.* at 9:37–43.

Layson’757 describes that “[a]t any time the central data-base system 22 may be commanded by law enforcement 32 or other agencies such as parole and probation 30 to query the portable tracking device 12 to ascertain the immediate status of the portable tracking device 12 and the location of the offender 16 or victim 18.” *Id.* at 3:18–23. When the current location of a subject violates the schedule rules and location constraints of the subject, “the portable tracking apparatus notifies the subject and the central data-base system immediately.” *Id.* at 9:48–50; *see also id.* at 7:10–14. According to Layson’757, “[a]n offender’s current position relative to any associated victim’s current position is analyzed . . . to determine if any alarms to law enforcement or corrections, commands to the offender and warnings to the victim are required based on the dynamic movements of the offender and victim.” *Id.* at 8:13–19. Layson’757 explains that “[b]y including wider buffer zones for locations that are meant to include or exclude a subject, the portable tracking device provides advanced notification to victims far beyond the transmitter range of the subject’s body-worn device.” *Id.* at 8:39–43.

2. Overview of Layson '213

Layson '213 is titled "System to Correlate Crime Incidents with a Subject's Location Using Crime Incident Data and a Subject Location Recording Device." Ex. 1008, (54). Layson '213 relates to "correlating crime incident data with the history of a subject's locations by using an all body worn, non-removable, tamper resistant location recording apparatus." *Id.* at 1:23–26.

Figure 1 of Layson '213, reproduced below, depicts "the end-to-end crime incident/subject location correlation system and its major subsystem elements for integrating subject locating methods with crime incident recording methods." Ex. 1008, 7:32–35.



As shown in Figure 1, crime incident/offender location correlation database 1 receives crime incident data 2, via a communication network 4,

and receives offender location data 3, via a communication network 5, on a continuous basis. *Id.* at 8:28–38. Law enforcement and corrections personnel use query terminal 37, 39 for structured queries. *Id.* at 20:40–42. According to Layson’213, “law enforcement query terminal 37 receives automated correlation reports and query results 38 using its connection to the communications network 4.” *Id.* at 10:12–14. Layson’213 explains that “[r]esults 36 from the crime incident/offender correlation data base 1 are comprised of automated correlation of crime incidents to offender locations and structured queries entered by law enforcement personnel.” *Id.* at 10:14–18. Further, “corrections query terminal 39 receives automated violation reports and query results 40 using its connection to the communications network 4.” *Id.* at 10:19–21. “Results 36 from the crime incident/offender correlation data base 1 are comprised of automated offender violation reports and structured queries entered by corrections personnel.” *Id.* at 10:21–24.

3. *Analysis of Claim 1*

Claim 1 recites, *inter alia*, “means to determine and report to the system that, another portable mobile remote unit has maintained relative proximity to the portable mobile remote over a period of time while in motion.” Ex. 1001, 12:4–7.

For this claim element, which Petitioner identifies as limitation 1[F], Petitioner asserts that the combination of Layson’757, Layson’213, and IllinoisLaw “determines and reports that the victim portable tracking device has maintained relative proximity to the offender’s portable tracking device over a period of time while in motion, which is the same as determining that both devices maintained relative proximity with one another over the period

of time while in motion.” Pet. 87–88 (citing Ex. 1002 ¶¶ 287–295).

Petitioner identifies the recited ““another portable mobile remote unit”” as the victim’s mobile unit in Layson’757 and Layson’213. *Id.* at 88.

Petitioner further identifies the recited ““the portable mobile remote”” as the offender unit of Layson’757 and Layson’213. *Id.*

Petitioner contends that “each time the central database receives the victim’s location, it transmits updated location constraints to the associated offender portable tracking devices, causing them to transmit their location to the central database if in violation of those updated location constraints.”

Pet. 88. Alternatively, Petitioner asserts that Layson’757 discloses ““data fusion processing”” where the central database receives the locations of the victim and offender tracking devices at intervals when ““analyz[ing] developing situations such as a stalker-victim encounters.”” *Id.* at 88–89 (citing Ex. 1007, 7:42–55; quoting Ex. 1007, 8:50–56).

More specifically, Petitioner contends that Layson’757 maintains a list of portable tracking devices at the central database and stores the locations received from those portable tracking devices. *Id.* at 89 (citing Ex. 1007, Fig. 7A, 7:66–8:1). Petitioner asserts that the stored locations would be provided to Layson’213’s correlation database for correlation and reporting purposes. *Id.* at 90. According to Petitioner, Layson’213 teaches that its “correlation database may receive ‘exclusion zone violations reported by [an] offender location monitoring system’—i.e., Layson’757’s central database—in real time.” *Id.* (citing Ex. 1008, 18:35–40). Petitioner asserts that Layson’213 teaches generating ““a table report”” of exclusion zone violations to provide evidence for use by law enforcement. *Id.* (citing Ex. 1008, 19:41–52).

Petitioner further contends that “the central database may determine that an offender and victim device maintained close proximity to one another over Layson’213’s ‘loiter time’ (‘period of time’) while the devices traveled a minimum distance threshold, to identify and report potential stalking behavior, thus performing the recited function.” *Id.* at 90–91 (citing Ex. 1002 ¶ 294; footnote omitted).

Patent Owner responds that Layson’757 triggers a constraint violation alert if an offender enters a victim’s exclusion zone, but does not teach reporting whether devices have maintained proximity over time while in motion. Prelim. Resp. 61. Patent Owner argues Layson’757’s immediate constraint violation alerts “do not align with adding a ‘loiter time’ before reporting” and “do[] not address the need for tracking devices to maintain relative proximity over time and distance. *Id.* at 62.

We agree with Patent Owner that Petitioner has failed to demonstrate that the proposed combination of Layson’757 and Layson’213 teaches determining that another portable mobile remote unit has maintained relative proximity to the portable mobile remote over a period of time while in motion. Prelim. Resp. 61–62. First, neither Layson’757’s immediate exclusive zone violation alerts nor Layson’213’s loiter time describe tracking devices to determine if they are in proximity *over time while in motion*. *Id.* (emphasis added).

For example, Layson’757 discloses that a portable tracking apparatus reports an exclusion zone violation immediately when a violation occurs. Ex. 1007, 9:48–50; Pet. 88; Ex. 2001 ¶ 205. We agree with Mr. McAlexander that the disclosure that “an offender will trigger a constraint violation [alert] if it violates any geographic boundary constraint of a

victim” does not mean there is a determination that a PRU has maintained relative proximity to another PRU over a period of time while in motion. Ex. 2001 ¶ 205. Rather, as Patent Owner explains, “[v]iolations can occur if the offender enters the exclusion zone or the victim moves into it, regardless of their relative motion.” Prelim. Resp. 62.

Further, Layson’213 uses a loiter time to ignore certain exclusion zone violations because “passing through an exclusion zone is permitted but loitering is not (i.e. pedophile driving by a school on the way to work).” Ex. 1008, 23:9–11, 23:33–36. On this point, we agree with Mr. McAlexander that “add[ing] a ‘loiter time’, whereby . . . Layson’757 did not send an alert to the Layson ’213 database unless the offender had ‘loitered’ within the exclusion zone for some minimum amount of time . . . does not mean that the offender’s and associated victim’s respective devices *move together* . . . for a pre-specified period of time while maintaining locations within a pre-specified radius from each other.” Ex. 2001 ¶ 206 (emphasis added). In other words, as with Layson’757’s exclusion zone violations, Layson’213’s loiter time identifies exclusion zone violations “regardless of their relative motion.” Prelim. Resp. 62.

To the extent Petitioner further contends that Layson’757’s “data fusion processing,” “post-time evaluation,” “building reports,” and “responding to queries for location history data” also demonstrate tracking devices to determine if they are in proximity over time while in motion determining, we are also not persuaded. Ex. 1002 ¶ 227. Petitioner asserts that Layson’757’s “data fusion processing” describes that the central database receives the locations of the victim and offender tracking devices at intervals when “analyz[ing] developing situations such as a stalker-victim

encounters.” Pet. 88–89 (citing Ex. 1007, 7:42–55; quoting Ex. 1007, 8:50–56). Layson’757 states that

[t]his distributed processing approach off-loads the central data-base system from collecting data in a continuous or real-time mode and allows the central data-base system to perform more temporal tasks such as data fusion where it analyzes developing situations such as a stalker-victim encounters and issues the appropriate warnings and instructions to all subjects.

Ex. 1007, 8:50–56. We understand Petitioner’s contention as suggesting that the data fusion process can collect occurrences of exclusion zone violations and identify the occurrence of stalking or whether a victim PRU is in proximity to an offender PRU over time while in motion. Although Petitioner and Mr. Andrews identify an analysis of stalker-victim encounters, this disclosure by itself fails to adequately explain how the data fusion process determines that another portable mobile remote unit has maintained relative proximity to the portable mobile remote *over a period of time while in motion*. See Ex. 1002 ¶ 294. At most, Petitioner’s argument is speculative and establishes that Layson’757 stores data that *could* be used to determine that another portable mobile remote unit has maintained relative proximity to the portable mobile remote *over a period of time while in motion*. See Pet. 88–89; Ex. 1002 ¶¶ 227, 281, 291 (citing Ex. 1007, 7:42–55, 8:9–20, 8:50–56).

Similarly, Petitioner’s asserts that Layson’213 teaches generating “‘a table report’” of exclusion zone violations to provide evidence for use by law enforcement. Pet. 90 (citing Ex. 1008, 19:41–52). Petitioner, supported by the testimony of Mr. Andrews, contends that “such a report would at least include, at each time interval, the identities of any offenders in violation of the victim’s buffer/exclusion zone, and the locations of those offenders.” *Id.*

(citing Ex. 1008, 23:9–21). Mr. Andrews further testifies that “Layson’757 also teaches that its central database system 22 may be used for ‘post-time evaluation’ of the received location data, such as ‘build[ing] reports’ and/or responding to ‘[q]ueries for location history data [] performed by law enforcement.’” Ex. 1002 ¶ 227 (alterations in original). As with the data fusion process, we find Petitioner’s argument is speculative and fails to demonstrate that that Layson’757 and Layson’213 teach storing exclusion zone violation data to determine that another portable mobile remote unit has maintained relative proximity to the portable mobile remote *over a period of time while in motion*. See Pet. 88–89; Ex. 1002 ¶¶ 227, 281, 291 (citing Ex. 1007, 7:42–55, 8:9–20, 8:50–56).

H. Ground 5: Alleged Obviousness over Layson’757, Layson’213, IllinoisLaw, and Wang

Petitioner asserts that claim 2 of the ’726 patent would have been obvious over the combination of Layson’757, Layson’213, IllinoisLaw, and Wang. Pet. 92–98. Patent Owner disagrees. Prelim. Resp. 62–66. For the reasons explained below, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its asserted challenge to claim 2.

Before addressing the parties’ arguments, we provide an overview of the Wang reference.

1. Overview of Wang

Wang is titled “Mobile Unit Tracking System.” Ex. 1009, (54). Wang relates to “tracking systems which maintain data describing the locations of mobile units.” *Id.* at 1:10–12.

Figure 1 of Wang, reproduced below, depicts “a region of the earth within which a communication network operates.” Ex. 1009, 2:21–22.

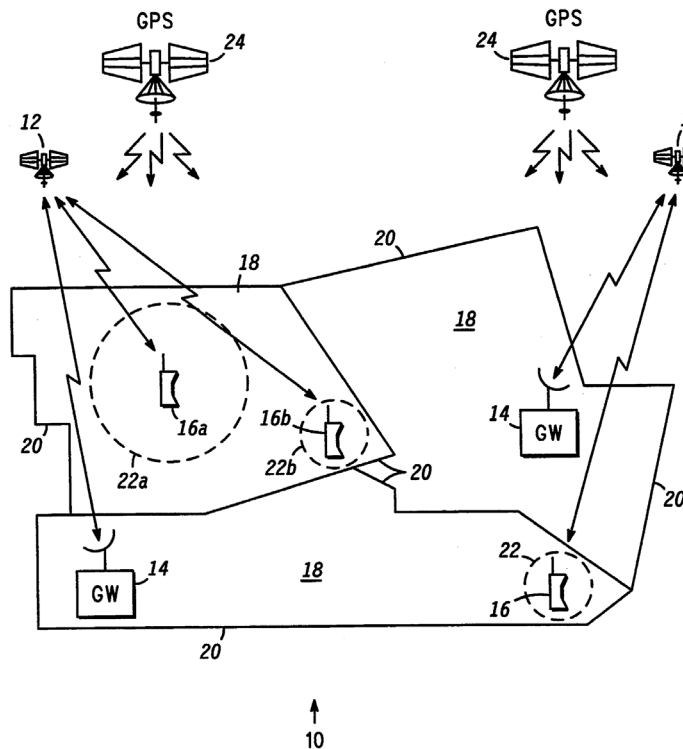


FIG. 1

In Figure 1, “[m]obile units 16 establish a data communication link with a nearby satellite 12, which may then relay the data communication to a nearby gateway 14.” *Id.* at 2:68–3:2. Mobile units 16 use “a satellite positioning system 24, such as the Global Positioning System (GPS),” to determine their own locations. *Id.* at 3:28–33.

Wang describes that “[m]obile units 16 operate, within any one of a number of different political jurisdictions 18,” that are “surrounded by political boundaries 20.” *Ex.* 1009, 3:3–5. According to Wang, “[n]etwork 10 needs to know with accuracy when mobile unit 16 crosses a boundary 20 so that frequency allocation, billing, tax, and other parameters may be set in accordance with the appropriate jurisdiction 18.” *Id.* at 3:6–10.

As shown in Figure 1, mobile unit 16a centrally located within jurisdiction 18 may move a relatively large distance (indicated by border

22a) before it nears boundary 20. *Id.* at 3:14–21. Consequently, network 10 needs only relatively inaccurate data concerning the location of mobile unit 16a. *Id.* at 3:16–18. In contrast, mobile unit 16b near boundary 20 may enter another jurisdiction by moving a relatively small distance, as indicated by the radius of border 22b. *Id.* at 3:22–27.

Each mobile unit 16 determines its own location and sends a location communication to a nearby “local” gateway 14 to inform network 10 of its location. Ex. 1009, 3:50–53. Upon receipt of the location communication, gateway 14 “generates data which define a border 22 and sends these border data back to the mobile unit 16.” *Id.* at 3:53–56. According to Wang, “when the mobile unit 16 goes outside the border 22, it sends a new location communication to network 10 and receives a new border definition in response.” *Id.* at 3:58–61.

2. *Analysis of Claim 2*

Having reviewed the Petition, we find that Petitioner’s reliance on Wang does not cure the above-noted deficiencies with respect to independent claim 1. Accordingly, Petitioner does not show that there is a reasonable likelihood that it would prevail in establishing unpatentability of claim 2 as obvious in view of Layson’757, Layson’213, IllinoisLaw, and Wang.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner has not demonstrated on the record a reasonable likelihood that it will prevail in showing at least one of the challenged claims of the ’726 patent is unpatentable.

V. ORDER

For the reasons given, it is
ORDERED that the Petition is *denied* as to all challenged claims, and no
trial is instituted.

IPR2024-00825
Patent 7,199,726 B2

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