

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALARM.COM INC.,
Petitioner,

v.

VIVINT, INC.,
Patent Owner.

Case IPR2015-01965
Patent 7,884,713 B1

Before MICHAEL R. ZECHER, JAMES B. ARPIN, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

ARPIN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Inter Partes Review
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

In its Petition requesting an *inter partes* review, Alarm.com Inc. (“Petitioner”) asserted the unpatentability of claims 1–54 of U.S. Patent No. 7,884,713 B1 (Ex. 1001, “the ’713 patent”), owned by Vivint, Inc. (“Patent Owner”). Paper 1 (“Pet.”), 4. The Petition identifies Alarm.com Inc. and Alarm.com Holdings, Inc. as real parties in interest. *Id.* at 1. On March 30, 2016, we issued a Decision granting institution of *inter partes* review of claims 1–54 of the ’713 patent. Paper 12 (“Dec. on Inst.”), 36. Patent Owner then filed a Patent Owner Response to the Petition (Paper 19, “PO Resp.”), and Petitioner replied (Paper 21, “Pet. Reply”). A consolidated hearing for the instant proceeding and related Case IPR2015-01977 was held on November 30, 2016. A transcript (Paper 35, “Tr.”) of that hearing is included in the record.

We have jurisdiction under 35 U.S.C. § 6, and this Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, addresses issues and arguments raised during the review. For the reasons discussed below, we determine that Petitioner has met its burden to prove, by a preponderance of the evidence, that claims 1–54 (“the challenged claims”) of the ’713 patent are unpatentable on the grounds upon which we instituted *inter partes* review.

A. *Applied References and Declaration*

Petitioner relies upon the following references, file history, and declaration in support of its grounds for challenging claims 1–54 of the ’713 patent:

Exhibit	References, File History, and Declaration
1003	File History of Patent No. US 7,884,713 B2
1005	U.S. Patent Application Publication No. 2005/0012611 A1, publ'd Jan. 20, 2005 ("Osman")
1006	U.S. Patent No. 6,680,675 B1, filed June 21, 2000, and issued Jan. 20, 2004 ("Suzuki")
1008	U.S. Patent Application Publication No. 2004/0230685 A1, publ'd Nov. 18, 2004 ("Seligmann")
1010	Declaration of Vernon Thomas Rhyne, Ph.D., P.E., R.P.A.

Pet. ii.

B. Asserted Grounds of Unpatentability

We instituted *inter partes* review of the challenged claims based on the following grounds (Dec. on Inst. 36; *see* Pet. 5–6):

Reference(s)	Basis	Claims Challenged
Osman	§ 102(b)	1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, ¹ 43, 45–48, and 50–54
Osman and Suzuki	§ 103(a)	4–8, 22–26, and 40–44
Osman and Seligmann	§ 103(a)	13, 31, and 49

C. Related Proceedings

The '713 patent is involved in a U.S. district court case captioned *Vivint, Inc. v. Alarm.com Inc.*, No. 2:15-cv-00392-CW (D. Utah 2015).

¹ Although challenged in the Petition (Pet. 19, 33) and addressed in the Decision on Institution (Dec. on Inst. 1, 15), we inadvertently omitted claim 39 from our listing of the claims on which we instituted this *inter partes* review. *Id.* at 36; *see id.* at 25. Despite this omission, both parties recognized that claim 39 was under review. PO Resp. 1 ("The Board instituted trial on claims 1-54 of U.S. Patent 7,884,713 ("'713 patent") on anticipation and obviousness grounds."); Pet. Reply 2 ("The Board should cancel claims 1-3, 9-16, 19-21, 27-34, 37-39 and 45-52. For the reasons set forth in the Petition and the Institution Decision, Osman alone or in combination with other references invalidates these claims.").

Pet. 1; Paper 9, 2. Concurrently with the instant Petition, Petitioner filed a second petition, Case IPR2015-01967, challenging claims 1–54 of the ’713 patent on different grounds. Pet. 1. We denied institution of an *inter partes* review in that proceeding. *Alarm.com Inc. v. Vivint, Inc.*, Case IPR2015-01967 (PTAB Mar. 30, 2016) (Paper 12). Petitioner also filed other petitions challenging the patentability of certain subsets of claims in the following patents owned by Patent Owner: (1) U.S. Patent No. 6,147,601 (Cases IPR2015-02004, IPR2016-00116, IPR2016-00155, and IPR2016-01080); (2) U.S. Patent No. 6,462,654 B1 (Cases IPR2015-02003, IPR2016-00161, IPR2016-01110, and IPR2016-01124); (3) U.S. Patent No. 6,535,123 B2 (Cases IPR2015-01995, IPR2016-00173, and IPR2016-01126); (4) U.S. Patent No. 6,717,513 B1 (Cases IPR2015-01997, IPR2016-00129, and IPR2016-01091); and (5) U.S. Patent No. 6,924,727 B2 (Cases IPR2015-01977 and IPR2015-02008). *See* Paper 17, 1–2; Paper 18, 1–2.

II. THE ’713 PATENT (EX. 1001)

A. *Subject Matter*

The ’713 patent relates generally to methods, systems, and computer program products for “processing an alert” (Ex. 1001, col. 6, l. 62), based on “location-aware information processing” (*id.* at col. 1, ll. 17–18). More specifically, the independent claims are directed to “techniques for alerting a user based in whole or in part on a location.” *Id.* at col. 1, ll. 18–20; claims 1, 19, and 37. The claimed subject matter is directed to allowing a user to enter or to receive a message, such as a reminder, when the user is at or near a particular location. *See id.* Figs. 2–4.

Figure 2 of the '713 patent is reproduced below:

FIG. 2

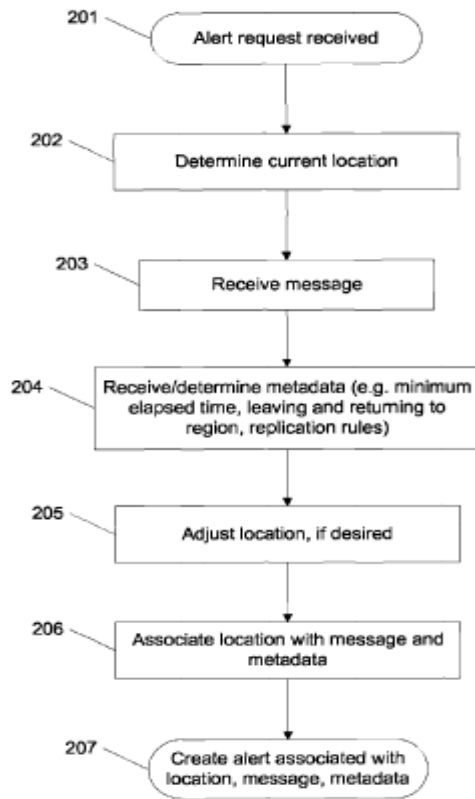


Figure 2 is a flow diagram of a method for creating an alert according to some of the disclosed embodiments. *Id.* at col. 1, ll. 42–43.

An alert refers herein to a location and optional time specification at which a notification such as a reminder may be made, with optional metadata such as a message, a region such as a radius from a location, and/or an indication that a region associated with the alert has been left since the alert was created.

Id. at col. 2, ll. 48–53 (emphasis added).

As depicted in Figure 2, a method for creating an alert, according to some disclosed embodiments, may include receipt of an alert request in step 201. *Id.* at col. 4, ll. 4–6. For example, receiving an alert request may involve presenting a user interface, such as a selectable menu item or a

button, and indicating that an alert, such as a reminder, should be issued “when the user is at or near the current location, for example by indicating ‘next time I am here’ or similar text associated with a user interface element, and to receive a selection of a user interface element indicating a choice associated with the alert.” *Id.* at col. 4, ll. 6–13.

A current location then may be determined in step 202. *Id.* at col. 4, ll. 20–29. For example, determining a current location may be achieved by sensing the current location using location sensor 103 of Figure 1, such as a global positioning system (“GPS”) receiver or a cellular receiver. *Id.* at col. 2, ll. 35–47. Moreover, in step 205, the user may adjust the location associated with the alert. *Id.* at col. 5, ll. 4–11. In particular, “a boundary of a region within which the alert may trigger may be displayed, and modifications such as dragging the boundary may be received and processed.” *Id.* at col. 5, ll. 11–14.

One or more messages may be received in step 203. *Id.* at col. 4, ll. 30–37. For example, a message may consist of text or a voice recording, which may be shown or played when the alert is triggered. The message may be received in conjunction with the alert request (step 201). *Id.* In step 204, various metadata may be received or determined. *Id.* at col. 4, ll. 38–58. For example, such metadata may include a minimum elapsed time specification after which the alert is to be checked and/or issued; a region associated with the current location within which the alert is to be checked and/or issued, such as a radius around the current location; a time of day or range of time of day, such as a starting and ending time; or a day of the week. *Id.*

In step 206, the location, message, and metadata may be associated together, for example, by storing them in memory (e.g., in alert store 104 of Figure 1). *Id.* at col 5, ll. 15–17. Thus, in step 207, the alert may be created using the associated location, message, and metadata, with or without modifications. *Id.* at col. 5, ll. 18–19.

Figure 3 of the '713 patent, in which the flow path of Figure 2 continues, is reproduced below:

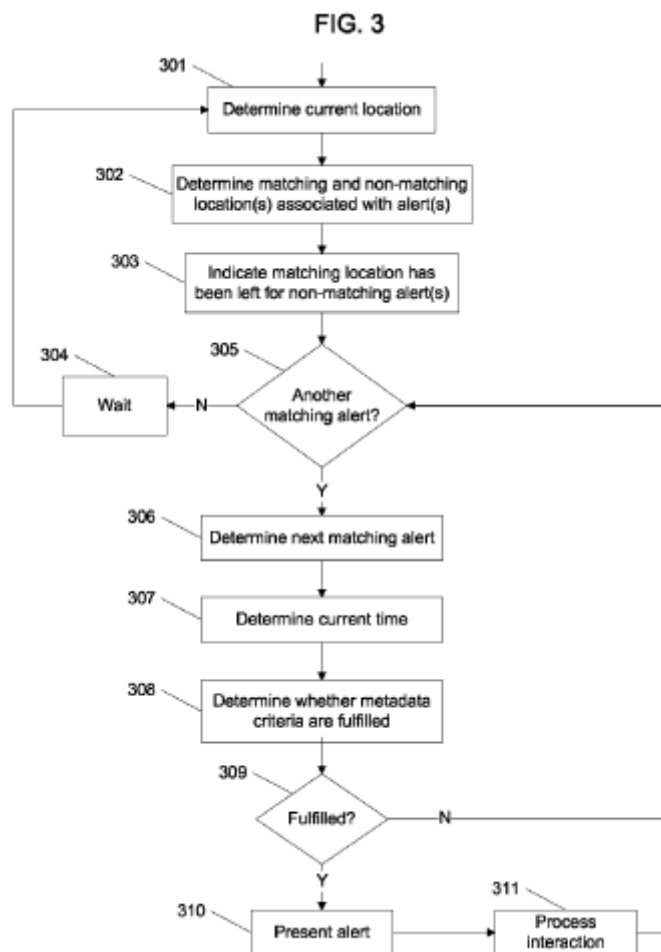


Figure 3 depicts the portion of the flow path relating to the triggering of an alert. *Id.* at col. 1, ll. 46–47. In particular, in step 301, the current location is determined. *Id.* at col. 5, ll. 22–27. In step 302, it may be determined

whether any alerts match the current location. *Id.* at col. 5, ll. 28–32. For example, the stored alerts may be reviewed to determine whether the current location is within a region, such as those set in step 204 of Figure 2, associated with each alert. *Id.* at col. 5, ll. 32–33.

If no alerts are identified that match the current location in step 305, a “wait” (step 304) may be performed. *Id.* at col. 5, ll. 45–54. After such a wait, a new current location may be determined and steps 302–305 may be repeated. *Id.* If one or more alerts match the current location, a matching alert may be selected from those matching alerts in step 306. *Id.* at col. 5, ll. 55–58. In steps 307–309, the alert’s metadata may be evaluated and, if specified metadata criteria are “fulfilled,” the alert may be triggered. *Id.* at col. 5, l. 59–col. 6, ll. 38.

B. Illustrative Claim

Of the challenged claims, claims 1, 19, and 37 are independent. Ex. 1001, col. 6, l. 62–col. 7, l. 10 (claim 1), col. 7, l. 64–col. 8, l. 15 (claim 19), col. 9, ll. 5–22 (claim 37). Claim 1 is illustrative and is reproduced below:

1. A method for processing an alert, comprising:
 - receiving a specification of a first location;
 - creating an alert;
 - associating the specification of the first location with the alert;
 - determining a first current location as a second location, wherein determining the second location follows receiving the specification of the first location and precedes determining a third location;
 - determining that the second location does not match the specification of the first location;

determining a second current location as the third location;
determining that the third location matches the
specification of the first location; and
presenting information relating to the alert.

Ex. 1001, col. 6, l. 62–col. 7, l. 10. Claim 1 is a method claim; claim 19 is a system claim, including a processor configured to perform steps substantially similar to those recited in claim 1; and claim 37 is a computer program product claim, including a computer readable storage medium comprising instructions for performing the steps of claim 1. Claims 2–18 depend directly or indirectly from claim 1 (*id.* at col. 7, ll. 11–63); claims 20–36 depend directly or indirectly from claim 19 (*id.* at col. 8, l. 16–col. 9, l. 4); and claims 38–54 depend directly or indirectly from claim 37 (*id.* at col. 9, l. 23–col. 10, l. 42).

III. CLAIM CONSTRUCTION

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under the broadest reasonable interpretation standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the

specification into the claims. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

A. Level of Skill in the Art

Petitioner argues that “[a] person of ordinary skill in the art of computer messaging at the time of the alleged invention would have had at least a Bachelor’s degree in computer science, electrical or computer engineering, or equivalent coursework, and *at least one year* of experience in computer messaging systems.” Pet. 15 (emphasis added). This definition differs slightly from the definition provided by Petitioner’s declarant, Dr. Rhyne. Ex. 1010 ¶ 20 (“*at least two years* of experience in computer messaging systems” (emphasis added)).

Patent Owner’s declarant, Mr. Williams, contends that “a person of ordinary skill in the art would have a Bachelor of Science degree in Electrical Engineering, Computer Engineering, Computer Science, or equivalent coursework, as well as at least two years of experience in location-aware information systems.”² Ex. 2001 ¶ 24. Moreover, Patent Owner contends that experience in “location-aware information systems,” as opposed to “computer messaging systems,” is significant. PO Resp. 2–3.

² Mr. Williams testifies that location-based service systems for location-aware applications are included within alert-based systems, which we find to be subsumed within the broader field of computer messaging systems. Ex. 2001 ¶ 7; *see id.* ¶ 15 (“These books extensively discuss location-related alerts in a variety of contexts. For example, *The Definitive Guide to GPS, RFID, Wi-Fi, and Other Wireless Location-Based Services* (2006 version) has over two dozen references to various types of alerts in location-based services such as, for example, geo-fencing alerts, navigation alerts, medical alerts, amber alerts, campus alerts, telemetry alerts, child location alerts, group 911 alerts, and retail/product proximity alerts.”).

Consequently, Patent Owner contends that Dr. Rhyne's testimony cannot be credited "because he has no experience with location-aware information processing—the general technology field of the '713 patent." *Id.*; *see id.* at 30–31 (arguing the same). Although Patent Owner acknowledges that Dr. Rhyne has experience working with "GPS, Loran, Transit, and Omega" location determining systems (*id.* at 31; *see* Ex. 1010 ¶ 14; Ex. 1029 ¶¶ 7–9), and that at least GPS is a location determining and sensing technology and service (*see* Ex. 2001 ¶ 25), Patent Owner notes that Dr. Rhyne's experience occurred as much as twenty years before the filing of the application that issued as the '713 patent (PO Resp. 31–32). Nevertheless, Patent Owner fails to explain why this timeframe of Dr. Rhyne's experience is significant in the context of the challenged claims or the applied references in this proceeding, much less how the timeframe of Dr. Rhyne's experience affects his qualifications to testify regarding what a person of ordinary skill in the art would have understood at or around the time the application that issued as the '713 patent was filed. *Id.*

Thus, after considering the parties' assessments of the level of skill in the art and the evidence of record, we do not observe a meaningful difference between the parties' assessments. We further note that either assessment appears consistent with the level of skill in the art at the time of the invention as reflected in the references applied in the instant

proceeding.³ See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Moreover, after considering the qualifications of each party's declarant, we are persuaded both declarants meet or exceed the qualifications set forth in either proposed assessment at the time in question, and our analysis in this Final Written Decision is supported by either assessment. See Ex. 1010 ¶¶ 6–18; Ex. 1029 ¶¶ 7–9; Ex. 2001 ¶¶ 7–16. Nevertheless, to the extent that it is necessary for us to determine a level of skill in the art, we accept Patent Owner's assessment of the level of skill in the art, but note that our conclusions would be the same under Petitioner's assessment.

B. Previously Disputed Terms

Petitioner proposes constructions based on the broadest reasonable interpretation standard for two sets of terms: (a) “presenting information relating to the alert” (claims 1 and 37) and “present information relating to the alert” (claim 19); and (b) “receiving a message” (claim 8 and 44) and “receive a message” (claim 26). See Pet. 15–17. Patent Owner challenged Petitioner's constructions in its Preliminary Response (see Paper 10 (“Prelim Resp.”), 6–7), but did not renew those challenges in its Patent Owner

³ *E.g.*, Ex. 1005 ¶ 3 (“The invention relates to a method of reminding a user subscribed to a communication network, *as well as* to a location reminder service architecture for reminding a user subscribed to a communication network.” (emphasis added)); Ex. 1006, col. 1, ll. 7–11 (“The present invention relates *generally* to electronic notification systems, *and more particularly*, to an electronic system and method for providing an alert of an entry in a to-do list when a user is within a pre-defined proximity location to perform the to-do list item.” (emphases added)); Ex. 1008 ¶ 1 (“The present invention relates to personal digital assistants in general, and, in particular, to reminders about tasks in a to-do list.”).

Response (see Paper 13, 3 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”)). Therefore, on this record, we maintain the following constructions that we adopted for purposes of the Decision on Institution. See Dec. on Inst. 10–13.

1. *“presenting information relating to the alert” (claims 1 and 37) and “present information relating to the alert” (claim 19)*

We remain persuaded by Petitioner’s arguments and evidence regarding the construction of these terms and adopt our analysis of that construction as set forth in the Decision on Institution. Dec. on Inst. 10–12. On this record, and in view of Patent Owner’s decision not to renew its challenge to the construction of these terms (Paper 13, 3), we maintain our determination that the broadest reasonable interpretation of the term “presenting information relating to the alert” or “present information relating to the alert” is “(i) presenting/present an indication that an alert has triggered; (ii) presenting/present information relating to the alert; or (iii) presenting/present the indication that the alert has triggered *and* the information relating to the alert.”

2. *“receiving a message” (claim 8 and 44) and “receive a message” (claim 26)*

We remain persuaded by Petitioner’s arguments and evidence regarding the construction of these terms and adopt our analysis of that construction as set forth in the Decision on Institution. Dec. on Inst. 12–13; see Paper 14, 1–2. On this record, and in view of Patent Owner’s decision not to renew its challenge to the construction of these terms (Paper 13, 3), we maintain our determination that the broadest reasonable interpretation of

the term “receiving a message” or “receive a message” is “delivering/deliver a message.”

C. Currently Disputed Term

1. “map”(claims 17, 18, 35, 36, 53, and 54)

Challenged claims 17, 35, and 53 depend from independent claims 1, 19, and 37, respectively; and each of these dependent claims recites “wherein receiving the specification of the first location includes displaying *a map* and enabling placement of a marker at a location thereon.” *See, e.g.*, Ex. 1001, col. 7, ll. 56–58 (claim 17, emphasis added). Neither Petitioner nor Patent Owner proposed a construction for the term “map” during the preliminary proceeding. *See* Pet. 15–17; Prelim. Resp. 4–9. Nevertheless, we determined that construction of this term was appropriate. *See* Dec. on Inst. 23 (construing the term “map” consistent with at least one dictionary definition; citing Ex. 3001).

As with any claim term, we begin our construction with the language of the claim. Here, the claims including the term “map” provide little to illuminate its construction. The claims merely recite (1) that the “map” may be displayed, (2) that a “marker” may be placed at a “location” on the “map,” and (3) that the displayed map may include a “boundary of a region thereon.” *E.g.*, Ex. 1001, col. 7, ll. 56–62 (claims 17 and 18). None of these recitations defines the term “map,” other than to make clear that a map may have a “marker” and a “boundary” placed upon it. The claims further recite that the methods (claim 1), systems (claim 19), or computer program products (claim 37) may “receiv[e] modifications to the boundary.” *Id.* at col. 7, ll. 61–62 (claim 18), col. 9, ll. 3–4 (claim 36), col. 10, ll. 41–42 (claim 54). However, this limitation does not require that the displayed

“boundary” is altered to reflect these modifications or that the received modifications are displayed on the “map.” The Specification of the ’713 patent explains that “modifications *such as* dragging the boundary may be received *and processed*,” but this is only an exemplary means for receiving boundary modifications, and the claims do not require that the modifications be “processed,” in addition to being “received.” *Id.* at col. 5, ll. 13–14 (emphases added).

We next turn to the Specification for guidance in construing the term “map.” In construing this term, we apply the broadest reasonable interpretation of the words “in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the . . . specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). As noted in our Decision on Institution, the Specification of the ’713 patent does not provide a definition for the term “map” and, apart from the claims themselves, there is only a single reference to the term “map” in the Specification. Dec. on Inst. 23 (citing Ex. 1001, col. 5, ll. 8–11).

The Specification of the ’713 patent describes that

a map may be displayed with the current location indicated by a marker, and a drag event dragging the marker to an adjusted location may be received. In another example, a boundary of a region within which the alert may trigger may be displayed, and modifications such as dragging the boundary may be received and processed.

Ex. 1001, col. 5, ll. 8–14 (emphasis added). We further note that the Specification of the ’713 patent does not provide an exemplary depiction of a “map.” See *id.*, Figs. 1–4. In addition, after reviewing the prosecution

history provided by Petitioner (Ex. 1003), we find no further discussion of the meaning of the term “map,” beyond that provided in the Specification and the challenged claims. Thus, neither the Specification of the ’713 patent nor the prosecution history of the ’713 patent significantly illuminates the construction of the term “map.”

As noted above, when construing claim terms, we apply the broadest reasonable interpretation of the words *in their ordinary usage*, as those words would be understood by one of ordinary skill in the art. *Morris*, 127 F.3d at 1054. In the absence of a clear construction of the term “map” based on the intrinsic evidence, we noted in our Decision on Institution that a relevant dictionary broadly defines the word “map” as “a representation, usu. on a flat surface, of selected features of all or a part of the earth or a portion of the heavens, shown in their respective relationships according to some convention of representation” or “*any maplike delineation or representation.*” Dec. on Inst. 23 (citing RANDOM HOUSE WEBSTER’S COLLEGE DICTIONARY 808 (2d Random House ed. 1999) (emphasis added) (Ex. 3001)); *see Nix v. Hedden*, 149 U.S. 304, 307 (1893) (citations omitted) (admitting dictionaries to understand the ordinary meaning of terms “not as evidence, but only as aids to the memory and understanding of the court”); *Agfa Corp. v. Creo Products, Inc.*, 451 F.3d 1366, 1376 (Fed. Cir. 2006) (noting that dictionaries may be helpful when claim construction involves “little more than the application of widely accepted meaning of commonly understood words”); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1322–23 (Fed. Cir. 2005) (en banc) (“[J]udges . . . may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the

patent documents.” (citation omitted)). We found that the quoted dictionary definition is consistent with the use of the word “map” in the Specification of the ’713 patent. *Id.* Thus, for purposes of the Decision on Institution, and on the then-existing record, we found that the above-quoted definition is the broadest reasonable interpretation of the term “map,” consistent with usage of that term in the Specification (Ex. 1001, col. 5, ll. 8–14); claims 17, 18, 35, 36, 53, and 54; and prosecution history (Ex. 1003), and with the understanding of a person of ordinary skill in the art (*see* Ex. 1010 ¶¶ 20, 63, 123–124, 126–127, 181–184, 228–229, 230–231; *see also* Ex. 1009 ¶ 46 (describing “map” options)).

In its Patent Owner Response, Patent Owner contends that our construction of the term “map” is too broad. PO Resp. 4–5 (citing Dec. on Inst. 23). In particular, Patent Owner contends that “[t]he maplike delineation or the maplike representation refers to scale information, which is required in all maps: ‘some indication of the scale must be *included* in the information presented on any map.’” *Id.* at 5 (quoting Ex. 2003, p. 92 (emphasis added); citing Ex. 2001 ¶¶ 32–33). Patent Owner further contends that, “[f]or a map *to be useful*, the map must include scale information because maps are necessarily smaller than the areas mapped.” *Id.* (emphasis added; citing Ex. 2001 ¶ 33). According to Patent Owner, such scale information may be provided expressly, such as by means of a legend on the “map” or implicitly by the relative spacing of map elements, such that a scale may be estimated. *Id.* (citing Ex. 2001 ¶¶ 33–40). Thus, we understand that Patent Owner would construe the term “map” as essentially “a representation of selected features of all or a part of the earth or a portion of the heavens, shown in their respective relationships according

to some convention of representation including *to an explicit or implicit scale.*”

In support of its contentions, Patent Owner relies on the teachings of Ex. 2003 (Robinson *et al.*, ELEMENTS OF CARTOGRAPHY (6th ed. 1953) (“Robinson”)) and the testimony of Mr. Williams. Robinson states that:

Maps, to be useful, are necessarily smaller than the areas mapped. Consequently, every map must state the ratio or proportion between measurements on the map to those on the earth. This ratio is called the map scale and should be the first thing the map user notices. *Map scale is an elusive thing because, as we saw in Chapter 5, transformation from globe to map means that the map’s scale will vary from place to place. It can even vary in different directions at one place.*

Ex. 2003, p. 92⁴ (emphasis added); see PO Resp. 5. Moreover, Robinson states that “[t]he scale of a map may be shown in many ways. It can be specifically indicated by some statement or graphic device. Or it may be shown indirectly by the spacing of parallels and meridians *and even subtly by the size and character of marks on the map.*” Ex. 2003, p. 92 (emphasis added).

The broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999). Patent Owner relies on Mr. Williams’s testimony to link the statements in Robinson to the

⁴ All references to the pages numbers in Robinson are the original page numbers located in the top left-hand or right-hand corner of each page in Exhibit 2003.

knowledge of a person of ordinary skill in the art.⁵ In particular, Mr. Williams testifies that “[t]he maplike delineation or the maplike representation refers to scale information, which is *required* in all maps.” Ex. 2001 ¶ 32. Mr. Williams then quotes extensively from Robinson in support of his testimony. *Id.* ¶¶ 33–39; *see also id.* ¶ 6 (“All opinions are from the perspective of a person having ordinary skill in the art at the time of the invention, whether I explicitly mention this or not and whether or not I provide my statements in the first person.”). Mr. Williams concludes that, if the “map” does not include an explicit scale, the scale may be “estimated” based on the known distance between points or the know area of a region. *Id.* ¶ 40; *see* Ex. 2003, p. 93 (“Sometimes you may want to determine the scale of a map on which no scale is given. Or, you may want to discover the scale of part of a map (since, as noted earlier, the scale is never the same over an entire flat map).”). Thus, Patent Owner contends that, based on the alleged understanding of a person of ordinary skill in the art, a “map” should be construed to require inclusion of an explicit or implicit scale.

Petitioner argues that our construction proposed in the Decision on Institution is the broadest reasonable interpretation of the term “map” (Pet.

⁵ We note a certain degree of irony in Patent Owner’s reliance on a reference published more than fifty years (PO Resp. ii (Robinson first published in 1953)) before the earliest filing date of the ’713 patent to demonstrate the knowledge of a person of ordinary skill in the art, yet at the same time challenging the relevance of experience gained by Petitioner’s declarant twenty years before the earliest filing date (*id.* at 31–32). Here, we do not rely on the age of the reference or the experience, but rather its relevance (i.e., Dr. Rhyne’s experience with GPS and the Robinson reference’s focus on cartography) in assessing the knowledge of a person of ordinary skill in the art.

Reply 3) and that Patent Owner’s proposed construction for the term “map” improperly incorporates limitations into the claims (*id.* at 2–7). In particular, Petitioner argues that “Patentees import a non-existent ‘scale’ requirement into the Board’s construction of ‘map’ but the Board’s construction was correct.” *Id.* at 3.

Specifically, Petitioner presents three arguments against Patent Owner’s construction of the term “map.” First, Mr. Williams did not consider the broadest reasonable interpretation standard when considering the construction of the term “maps.” *Id.* at 4. We agree with Petitioner that “no part of the specification, claims or prosecution history mentions a scale requirement. In addition, adding the concept of scale to any construction of ‘map’ would narrow the interpretation of ‘map’ inconsistently with the broadest reasonable interpretation of the term.” *Id.* (citing Ex. 1029 ¶¶ 26–27). Regardless whether the construction is slightly broader or narrower, it is axiomatic that the construction must be *reasonable*. The absence, however, of *any* intrinsic evidence to support the inclusion of a “scale” requirement in Patent Owner’s construction of the term “map” weighs against the reasonableness of such an inclusion.

Second, Petitioner argues that the only evidence that Patent Owner proffers in support for its construction of the term “map” is a more than fifty year old cartography textbook (Ex. 2003) and that Patent Owner offers no evidence, apart from Mr. Williams’s testimony, as to why a person of ordinary skill in the art would consult and rely on that book. Pet. Reply 4–5. As Petitioner and its declarant argue, neither party’s assessment of the level of skill in the art involves the study of cartography. Petitioner states that “a [person of ordinary skill in the art] was unlikely to consult a cartography

book because, as Dr. Rhyne and Mr. Williams agree, a [person of ordinary skill in the art] is a computer scientist or engineer—not a cartographer.” *Id.* (citing Ex. 1029 ¶ 28); see Tr. 9:8–17; *supra* Section III.A. Instead, in Dr. Rhyne’s opinion, “a [person of ordinary skill in the art] as both Mr. Williams and I have defined such an individual, would have consulted both standard and technical dictionaries, should he or she have wanted to confirm the plain meaning of the claim term ‘map.’” Ex. 1029 ¶ 29 (citing alternative dictionary definitions consistent with the dictionary definition proffered by the Board (Ex. 3001) in the Decision on Institution); see Pet. Reply 4–6.

Third, despite Mr. Williams’s testimony, he was unable to determine whether certain images identified as “maps” would fall within Patent Owner’s proposed construction of the term “map.” Pet. Reply 6 (citing Ex. 1015, 77:2–19, 78:3–24, 79:9–18, 81:3–82:16, 82:17–83:20, 83:22–86:5, 86:15–18, 92:21–95:14); see Tr. 12:7–24. Moreover, Petitioner notes that

Mr. Williams admitted that a number of the images that were shown to him, including a ‘Zoomap’ of the Phoenix Zoo, met the ‘colloquial’ definition of the word ‘map’ ([Ex. 1015], 80:6-10, 82:13-16, 83:13-20) and that the ‘colloquial’ definition of map need not include scale information, (*Id.*, 59:2-4, 80:6-13, 83:13-20).

Pet. Reply 6–7; see Ex. 1029 ¶¶ 30–33 (discussing commonly identified “maps”).

Because we determine that Patent Owner’s proposed construction for the term “map” relies on the incorporation of limitations that are not clearly supported by the intrinsic evidence (e.g., the Specification, claims, or prosecution history); because the evidence relied upon by Patent Owner comes from a specialized field different from and not clearly overlapping

with the parties' assessment of the level of skill in the art; and because both parties agree that more general (e.g., colloquial) interpretations for the term "map" exist which would have been available and apparent to persons of ordinary skill in the art and which are not inconsistent with the limited intrinsic evidence, we are not persuaded to adopt Patent Owner's narrower construction of the term "map." We conclude that the broadest reasonable interpretation of the term "map" encompasses "maps" including an explicit or implicit scale, but that the interpretation of the term "map" is not limited to such "maps." Therefore, on this record, we maintain our previous construction of the term "map" to mean "a representation, usu. on a flat surface, of selected features of all or a part of the earth or a portion of the heavens, shown in their respective relationships according to some convention of representation" or "any maplike delineation or representation."

2. Other Claim Terms

Neither Petitioner nor Patent Owner offers constructions of any other claim terms in the challenged claims. *See* Pet. 15–17. Only terms that are in controversy in this proceeding need to be construed, and then only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). On this record, no other claim terms require express construction.

IV. ANALYSIS

Petitioner argues that claims 1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, 43, 45–48, and 50–54 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Osman; claims 4–8, 22–26, and 40–44 are unpatentable under

35 U.S.C. § 103(a) as rendered obvious over the teachings of Osman and Suzuki; and claims 13, 31, and 49 are unpatentable under 35 U.S.C. § 103(a) as rendered obvious over the teachings of Osman and Seligmann. *See supra* Section I.B.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). Our reviewing court explains that

unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed, and thus, cannot anticipate under 35 U.S.C. § 102.

Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1371 (Fed. Cir. 2008); *accord In re Arkley*, 455 F.2d 586 (CCPA 1972). However, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art;

(2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective evidence of nonobviousness (i.e., secondary considerations).⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

In the Patent Owner Response, Patent Owner elected to challenge Petitioner’s asserted grounds with respect to only a limited number of claims: claims 17, 18, 35, 36, 53, and 54 as allegedly anticipated by Osman and claims 4–8, 22–26, and 40–44 as allegedly rendered obvious by Osman and Suzuki. PO Resp. 1–2. With the exception of a general argument that Dr. Rhyne lacks relevant technical experience and that his testimony should be given little or no weight (PO Resp. 2–3), Patent Owner presents no arguments or evidence with respect to the other challenged claims and, in particular, presents no arguments or evidence with respect to the challenges to independent claims 1, 19, and 37. *See id.* at 3. Patent Owner concludes that Petitioner’s “grounds of unpatentability directed to claims 4–8, 17, 18, 22–26, 35, 36, 40–44, 53, and 54 fail, and the Board should issue a final written decision confirming the patentability *of these claims.*” *Id.* at 3 (emphasis added); *see id.* at 33 (“In view of the above, [Patent Owner] respectfully requests the Board to deny the proposed grounds of unpatentability *based on Osman and Suzuki.*” (emphasis added)). Thus, Patent Owner’s limited response to Petitioner’s challenges does not provide specific arguments or evidence with respect to claims 1–3, 9–16, 19–21, 27–

⁶ Patent Owner does not contend in its Patent Owner Response that such secondary considerations are present.

34, 37–39, and 45–52 or the proposed grounds of unpatentability based on Seligmann. *See id.* at 3–32 (Patent Owner’s “Arguments”).

Nevertheless, the burden of proving the unpatentability of the challenged claims rests and remains with Petitioner. Arguments and evidence sufficient to support a determination that there is a reasonable likelihood of prevailing in showing the unpatentability of challenged claims, however, also may be sufficient, especially if acquiesced to and/or unchallenged, to support a determination of unpatentability by a preponderance of the evidence. Petitioner presents detailed mappings of the challenged claims onto the teachings of the applied references, supported by Dr. Rhyne’s testimony. *See* Pet. 18–39, 44–51. On this record, and for the reasons set forth below, we are persuaded that Petitioner demonstrates by a preponderance of the evidence that claims 1–54 of the ’713 patent are unpatentable.

A. Claims 1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, 43, 45–48, and 50–54 as Anticipated by Osman

Petitioner argues that claims 1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, 43, 45–48, and 50–54 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Osman. Pet. 18–34.

1. Osman (Ex. 1005)

Osman describes methods of reminding a user, subscribed to a communication network, of tasks to be completed, based on the user’s location alone or in combination with other specifications. Ex. 1005 ¶¶ 12–14. According to an embodiment, the described methods include defining a reminder profile for a specific terminal (e.g., a cellular device (*see id.* ¶ 30)) and acquiring location information for the specific terminal attached to the

communication network (see *id.* ¶ 12). Further, the methods involve the steps of comparing the acquired location information with the defined reminder profile, and, if the acquired location information matches the defined reminder profile, issuing a trigger signaling to at least one user, and outputting a reminder notification to the at least one user at a respective user terminal. *Id.* ¶ 13.

Osman's Figure 1 is reproduced below:

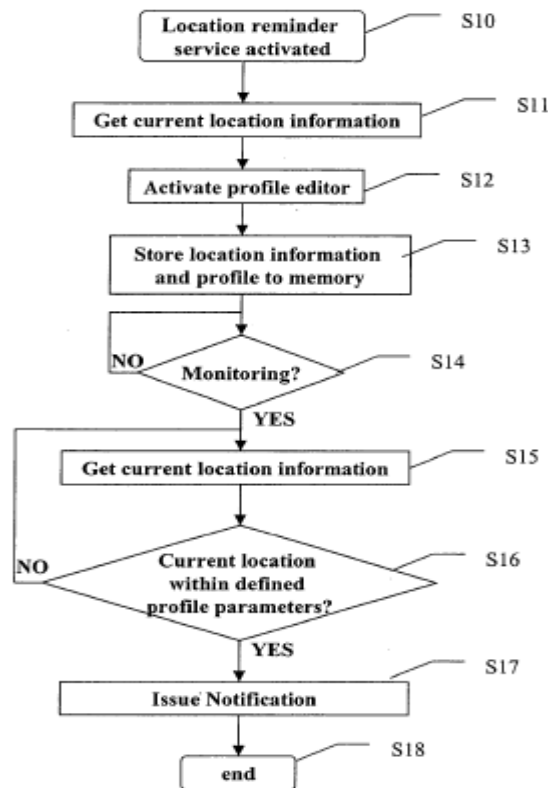
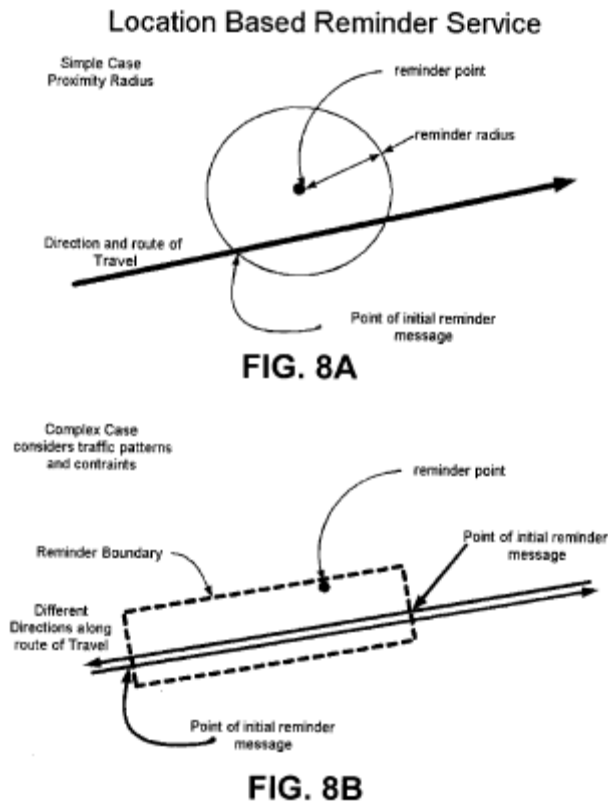


Fig. 1

Figure 1 depicts a flowchart outlining steps according to an embodiment of Osman's methods. *Id.* ¶ 21. At step S10, the location reminder service is activated, and, at step S11, the user's current location information is obtained. *Id.* ¶ 30. In step S12, a profile editor is activated,

such that the location reminder may be established and parameters can be entered specifying the conditions under which an issue notification is triggered. *Id.* The reminder profile may include a reminder location, a spatial reminder range, a temporal reminder range, and the like. *Id.* ¶ 32. At step S13, the location and profile information are stored in a memory. *Id.* ¶ 37. At steps S14–S16, the location of the user may be monitored, and, if the user's location satisfies the spatial or temporal parameters specified in the reminder profile, a notification may be issued at step S17. *Id.* ¶¶ 41–49.

Osman's Figures 8A and 8B are reproduced below:



Figures 8A and 8B are examples of spatial range reminders, which may be specified in a reminder profile. *See id.* ¶ 29; *see also id.* ¶ 36 (noting that spatial or temporal reminders may be included in the reminder profile).

Figure 8A depicts an example of a reminder point as a reminder location, around which a spatial reminder range is defined as a circle having a reminder radius. *Id.* ¶ 34. Figure 8B depicts an example of a reminder point as a reminder location, around which a spatial reminder range is defined as a rectangle. *Id.* ¶ 35.

2. Analysis

Petitioner provides an explanation of its arguments regarding the mapping of the elements of claims 1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, 43, 45–48, and 50–54 to Osman. Pet. 18–34. Initially, we note that Petitioner provides a general description of the mapping of these challenged claims onto Osman (*id.* at 18–21) and claim charts detailing the mapping of each and every element of these challenged claims onto the disclosure of Osman (*id.* at 21–34).

a. Claims 1, 19, and 37

As noted above, claim 1 is a method claim; claim 19 is a system claim, including a processor configured to perform steps substantially similar to those recited in claim 1; and claim 37 is a computer program product claim, including a computer readable storage medium comprising instructions for performing the steps of claim 1. Ex. 1001, col. 6, l. 62–col. 7, l. 10 (claim 1), col. 7, l. 64–col. 8, l. 15 (claim 19), col. 9, ll. 5–22 (claim 37). Although claims 1, 19, and 37 are directed to methods, systems, and computer program products, respectively, the elements of each of these claims are substantially identical.

Referring to claim 1, Petitioner argues that the recited method for processing an alert maps to Osman’s teaching of “a method of reminding a

user subscribed to a communication network, as well as to a location reminder service architecture.” Pet. 21 (quoting Ex. 1005 ¶ 3). Further referring to Osman’s Figure 1, reproduced above, Petitioner argues that the recited steps of “receiving a specification of a first location; creating an alert; [and] associating the specification of the first location with the alert” map to Osman’s steps S11–S13 and S15. *Id.* at 21–22 (quoting Ex. 1005 ¶¶ 30, 31, 37, 39). Referring again to Osman’s Figure 1, Petitioner argues that the recited steps of “determining a first current location as a second location, wherein determining the second location follows receiving the specification of the first location and precedes determining a third location; determining that the second location does not match the specification of the first location; [and] determining a second current location as the third location” map to Osman’s steps S15 and S16. *Id.* at 22–23 (quoting Ex. 1005 ¶¶ 46, 47). Finally, referring once again to Osman’s Figure 1, Petitioner argues that the recited steps of “determining that the third location matches the specification of the first location; and presenting information relating to the alert” map to Osman’s steps S16 and S17. *Id.* at 23–24 (quoting Ex. 1005 ¶ 49). Because of the similarity between the limitations of claim 1 and those of claims 19 and 37, Petitioner relies on substantially the same arguments and evidence to demonstrate that claims 19 and 37 also are anticipated by Osman. *Id.* at 29–30 (claim 19), 32 (claim 37); *see* Ex. 1010 ¶¶ 55–90 (claim 1), 129–158 (claim 19), 185–205 (claim 37).

Although Patent Owner does not raise specific challenges to the mapping of the elements of claims 1, 19, and 37 onto the disclosure of Osman, Patent Owner generally challenges the relevant technical experience of Dr. Rhyne and the weight that should be given to his testimony (PO Resp.

30–32). *See* Pet. Reply 24. We have addressed Patent Owner’s challenge to Dr. Rhyne’s technical experience above (*see supra* Section III.A.), and we give Dr. Rhyne’s testimony appropriate weight in view of our conclusions regarding his credentials, the assessment of the level of skill in the art, and the quality of and support provided for his testimony. *See Yorkey v. Diab*, 601 F.3d 1279, 1284 (Fed. Cir. 2010) (“We defer to the Board’s findings concerning the credibility of expert witnesses.”). We find Dr. Rhyne’s testimony regarding Osman’s disclosure and the mapping of the elements of claims 1, 19, and 37 onto Osman’s disclosure credible, persuasive, and un rebutted.

Patent Owner does not challenge the specific mapping of the elements of the independent claims 1, 19, and 37 onto Osman. PO Resp. 1–3; *see* Pet. Reply 2; Paper 13, 3 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”). As noted above, Petitioner provides both an explanation of its anticipation arguments and a detailed mapping of the elements of the independent claims onto Osman’s disclosure. Pet. 18–34. Petitioner uses specifically cited quotations from Osman in its claim charts, accompanied by appropriate underlying and highlighting to emphasize the portions of Osman’s disclosure upon which it relies. *E.g.*, Pet. 22–23. Moreover, we find that Petitioner’s arguments with respect to independent claims 1, 19, and 37 are adequately supported by Dr. Rhyne’s credible testimony. *E.g.*, Ex. 1010 ¶¶ 55–90. We are persuaded by and adopt Petitioner’s arguments regarding the unpatentability of independent claims 1, 19, and 37. Based on the record developed during trial, Petitioner has demonstrated by a preponderance of

the evidence that claims 1, 19, and 37, are unpatentable as anticipated by Osman.

b. Dependent Claims 17, 35, and 53

Challenged claims 17, 35, and 53 depend from independent claims 1, 19, and 37, respectively; and each of these dependent claims recites “wherein receiving the specification of the first location includes *displaying a map* and enabling placement of a marker at a location thereon.” *See, e.g.*, Ex. 1001, col. 7, ll. 56–58 (claim 17; emphasis added). Petitioner argues that

Claims 17, 35, and 53 require the user to specify a first location by . . . “placement of a marker” on a map Osman anticipates all of these claims. Osman discloses the use of a “profile editor” to define a “spatial reminder range,” which comprises specification of a point on a map, around which is a “reminder radius.” Ex. 1005 at ¶¶ 31, 32, 34, Figs. 8A, 8B.

Pet. 20–21; *see, e.g., id.* at 28 (claim chart with respect to claim 17). Patent Owner contends that Osman fails to disclose this element of claims 17, 35, and 53 for three reasons. PO Resp. 9–20.

First, Patent Owner argues that the “map” element recited in claims 17, 35, and 53 does not map to Osman’s Figures 8A and 8B, reproduced above, because Osman’s Figures 8A and 8B do not disclose a scale explicitly or implicitly. *Id.* at 9–17. Nevertheless, Patent Owner’s contentions are based on its proposed construction of the term “map” (*see id.* at 4–9), which we did *not* adopt (*see supra* Section III.C.1.), and its assertion that Osman’s Figures 8A and 8B do not include a scale (PO Resp. 9–17). For the reasons set forth in our claim construction section above, we determined that the broadest reasonable interpretation of the term “map” includes, but does not require, an explicit or implicit scale.

Petitioner argues that Osman’s Figures 8A and 8B, as explained by Osman’s Specification (*see* Ex. 1005 ¶¶ 31–32 (Fig. 8A), 34 (Fig. 8B)), disclose the “map” and the “placement of a marker,” as those elements are recited in claims 17, 35, and 53. Pet. 20–21, 28 (claim 17), 31–32 (claim 35), 34 (claim 53); Pet. Reply 2–7; *see* Ex. 1005, Fig. 8A, 8B (depicting “route of travel” and “reminder point”). In particular, we are persuaded that the description of the use of the profile editor (step S12) for placement of the marker location, described with respect to Osman’s Figures 8A and 8B, shows the “placement of a marker,” as recited in these claims. Ex. 1005 ¶ 32; *see also* Pet. 28 (citing the same).

Further, Dr. Rhyne testifies that a person of ordinary skill in the art would have understood Osman’s Figures 8A and 8B to disclose the “map” element recited in claims 17, 35, and 53. Ex. 1010 ¶¶ 123–125 (claim 17), 181–182 (claim 35), 228–229 (claim 53); *see* Ex. 1029 ¶¶ 27, 29. In addition, Dr. Rhyne testifies that a person of ordinary skill in the art would have understood Osman’s Figures 8A and 8B to disclose the “placement of a marker,” as recited in claims 17, 35, and 53. Ex. 1010 ¶¶ 124 (claim 17), 182 (claim 35), 229 (claim 53); *see* Ex. 1029 ¶ 45. Because Dr. Rhyne’s testimony is based on the broadest reasonable interpretation of the term “map” and is supported adequately by cited evidence, we find Dr. Rhyne’s testimony to be both credible and persuasive. Moreover, not only is Mr. Williams’s testimony based on an overly narrow construction of the term “map,” Mr. Williams’s testimony failed to consistently distinguish between “maps” based on his proposed construction of that term. *See* Ex. 1029 ¶ 30 (citing Ex. 1015, 75:8–82:20); *see also* Ex. 1015, 80:6–81:2 (distinguishing between “colloquial” maps and “technical” or cartographical maps).

Therefore, we are persuaded that Osman's Figures 8A and 8B disclose a "map" and "placement of a marker," as recited in claims 17, 35, and 53.

Nevertheless, even if the broadest reasonable interpretation of the term "map" required inclusion of an explicit or implicit scale, as Patent Owner contends, we agree with Petitioner that Osman's Figures 8A and 8B provide at least an implicit scale. Pet. Reply 11–13 (citing Ex. 2004, 26:5–27:3; Ex. 1029 ¶ 35); see Tr. 13:1–14:18. Patent Owner contends that

Map scales can be implicitly expressed in different ways, for example by (i) using a known distance between two points on a map or (ii) using a known area of a map region. (Williams Dec., ¶¶ 39-40.)

For example, in using a known distance between two points on a map, an implicit map scale can be determined by measuring a map distance between the two points. (*Id.*) This measurement can be compared to the known distance between the two points to determine the map scale. (*Id.*) Figure 3 of Mr. Williams's declaration shows a map of Australia with annotations illustrating how a map scale can be determined based on a known distance between two points. (*Id.*)

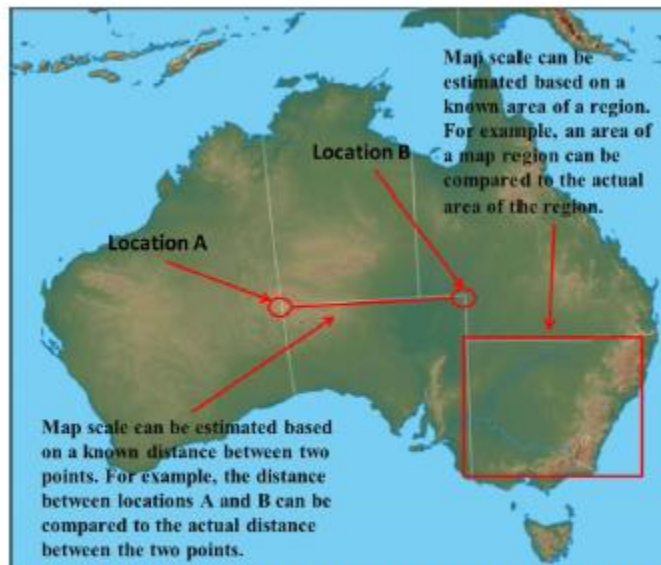


Figure 3 of Mr. Williams's declaration – annotated map showing two examples of how to implicitly estimate map scale

PO Resp. 8 (reproducing Fig. 3 from Ex. 2001 ¶ 40). Although Patent Owner contends that an implicit scale can be determined, Mr. Williams's testimony and the annotations from his Figure 3 make clear that the scale only is "estimated" from measurement taken from the image. Ex. 2001 ¶ 39 (quoting Ex. 2003, p. 93 ("You can *estimate* map scale along a line by measuring map distance between two points that are a known earth distance apart and then computing the scale." (emphasis added))).

As Dr. Rhyne testifies, an implicit scale can be estimated from the length of the "reminder radius" in Osman's Figure 8A or from the dimensions of the "reminder boundary" in Osman's Figure 8B, either of which would provide "a known distance between two points on a map." Pet. Reply 11–14; *see* Ex. 1029 ¶¶ 32–35; Ex. 2004, 26:5–27:3, 28:14–29:13. During his deposition, Mr. Williams acknowledged that information, such as that contained in Osman's Figures 8A and 8B, was sufficient information to permit estimation of a scale. *See* Ex. 1015, 78:18–79:8. Further, Patent Owner, contends that "[m]ap scales can be implicitly expressed in different ways, for example by . . . (ii) using a known area of a map region." PO Resp. 8. We note that, with respect to Osman's Figure 8A, the area of the circle defined by the "reminder radius" is calculated easily from the formula πr^2 and that, with respect to Osman's Figure 8B, the area of the rectangular "reminder boundary" is calculated easily by multiplying the lengths of the two adjacent sides of the boundary. Pet. Reply 12–13; *see* Ex. 2003, p. 93 ("You can also determine map scale using area measurements. To do so, you first must find a region of known size. Then compute the area of that region on the map. You can then determine the proportional relation between map area and earth area."). Thus, we

conclude that, even if we were to adopt Patent Owner’s construction of the term “map,” Osman’s Figures 8A and 8B also teach a “map” including an implicit scale.

Second, Patent Owner contends that “Osman’s ‘Direction and Route of Travel’ lines in Figures 8A and 8B are not shown in the spatial viewpoints and thus do not ‘show[] the basic elements of a map,’ as alleged by [Petitioner’s] expert Dr. Rhyne. (Williams Dec., ¶ 44.)” PO Resp. 18; see Ex. 1010 ¶¶ 124, 127, 182, 184, 229, 231. In particular, Patent Owner contends that the “Direction and Route of Travel” lines are “not stored in the reminder profile” and are “not accessed by a user’s device when allegedly *displaying* the spatial viewpoints of Figures 8A and 8B.” PO Resp. 18–19 (citing Ex. 2001 ¶ 44). Petitioner counters that a person of ordinary skill in the art

would realize that these lines would not need to be stored with the profile to be displayed as part of the user interface for the profile editor. Ex. 1029, ¶ 44. As Figures 8A and 8B demonstrate, these lines are displayed, and Dr. Rhyne’s reliance on them as evidence that these figures represent a map that is drawn proportionally and to scale is proper.

Pet. Reply 10–11. Specifically, Dr. Rhyne testifies that

just because these lines are not stored with the reminder profile does not mean that they are not displayed to the user as part of the map-based graphical user interface that the user employs to define his reminder profile. *In other words, a [person of ordinary skill in the art] would realize that these lines would be displayed, whether stored or not, and as such, my reliance on the imagery of Figures 8A and 8B was proper as evidence that Figures 8A and 8B are maps.*

Ex. 1029 ¶ 44 (emphasis added). Mr. Williams’s testimony is not contrary to Dr. Rhyne’s testimony on this point and goes instead to whether the

“Direction and Route of Travel” lines provide useful information with respect to the determination of *scale*. Ex. 2001 ¶ 44 (“Neither the figure nor the detailed description of Osman explicitly or implicitly describes Figure 8A as having scale information.”). Therefore, we are not persuaded that the storage site for the “Direction and Route of Travel” lines is relevant to the determination of whether Osman’s Figure 8A or 8B is a display of a “map.”

Third, Patent Owner contends that Osman does not disclose that its Figure 8A or 8B is “displayed.” PO Resp. 19–20. In particular, Patent Owner contends that:

At most, displayed information is limited to a user entering a reminder location and a spatial reminder range during an initialization process. (*Id.* at ¶ 58.) For example, Osman simply discloses that “the [profile] editor enables the user to define the reminder profile which includes at least a reminder location, and a spatial reminder range defined with reference to the reminder location.” (Osman, ¶ 32.) And, Osman’s description of Figures 8A and 8B in the context of the profile editor does not disclose that these figures are displayed to the user. (Williams Dec, ¶ 58.) *Osman is silent regarding a map being displayed to the user, much less [Petitioner’s] alleged map display that allows the user to define reminder location and spatial reminder range information.*

Id. (emphasis added). Petitioner disagrees and argues that Patent Owner’s contention is inconsistent with Osman’s disclosure that, in step S12 of Osman’s Figure 1, “[t]he profile *editor* enables a user to *edit* his reminder profile or even multiple reminder profiles *via a man-machine interface such as a display* and keyboard or any other suitable input/output mechanism *such as a mouse or stylus with touchscreen display or the like.*” Ex. 1005 ¶ 31 (emphases added); see Pet. Reply 8–10. As Dr. Rhyne testifies,

Osman’s teachings of using a man-machine interface to create a reminder profile, coupled with its use of Figures 8A and 8B to describe that process teaches a [person of ordinary skill in the art] that those figures are exemplary user interfaces for defining and editing a location-based reminder profile. *Further, a stylus and touchscreen as disclosed in Osman were commonly be used to interact with a Graphical User Interface, for instance, to edit or draw the boundary of a reminder profile.*

Ex. 1029 ¶ 43 (emphasis added). Thus, Petitioner argues that a person of ordinary skill in the art “would understand that the capability to adjust the profile with a ‘mouse or stylus with a touch-screen display’ demonstrates that a map is both displayed and that its boundaries can be modified.” Pet. Reply 8. Given Osman’s disclosure of a “profile *editor*” and its corresponding disclosure of enabling the user “to *edit*” the reminder profile, we agree with Petitioner in this regard.

We have addressed Patent Owner’s challenge to Dr. Rhyne’s technical experience above (*see supra* Section III.A.), and we give Dr. Rhyne’s testimony appropriate weight in view of our conclusions regarding his credentials, the assessment of the level of skill in the art, and the quality of and support provided for his testimony. *See Yorkey*, 601 F.3d at 1284.

Therefore, on this record, we are persuaded that Petitioner has shown by a preponderance of the evidence that Osman discloses the additional elements recited in claims 17, 35, and 53.

c. Dependent Claims 18, 36, and 54

Challenged claims 18, 36, and 54 depend from independent claims 1, 19, and 37, respectively; and each of these dependent claims recites “wherein receiving the specification of the first location includes displaying a map with a boundary of a region thereon, and *receiving modifications to*

the boundary.” *E.g.*, Ex. 1001, col. 7, ll. 60–63 (claim 18; emphasis added).

Petitioner argues that

Osman discloses the use of a “profile editor” to define a “spatial reminder range,” which comprises specification of a point on a map, around which is a “reminder radius.” Ex. 1005 at ¶¶ 31, 32, 34, Figs. 8A, 8B. The reminder radius can be re-drawn, *e.g.*, such that it is rectangular. When the user crosses the threshold of the spatial reminder range, an alert will trigger. Ex. 1005 at ¶¶ 34, 35, 47; FIGS. 8A, 8B.

Pet. 21; *see, e.g., id.* at 28–29 (claim chart with respect to claim 18).

Consequently, Petitioner argues that Osman discloses this element of claims 18, 36, and 54.

As noted above, the Specification of the ’713 patent describes “a boundary of a region within which the alert may trigger may be displayed, and modifications such as dragging the boundary *may be received and processed.*” Ex. 1001, col. 5, ll. 11–14 (emphasis added). As Petitioner notes, however, Osman similarly describes that the profile editor “enables the user to define the reminder profile *which includes at least a reminder location, and a spatial reminder range defined with reference to the reminder location.*” Ex. 1005 ¶ 32; *see id.* ¶ 35 (describing the rectangular “reminder range” depicted in Figure 8B).

Patent Owner contends that the methods, systems, and computer program products, recited in claims 18, 36, and 54, respectively, permit “[t]he user [to] adjust the boundary by, *for example*, dragging one or more boundary portions to define a desired map region.” PO Resp. 21 (emphasis added; citing Ex. 1001, col. 5, ll. 11–14; Ex. 2001 ¶ 29). Further, Patent Owner contends that, unlike the methods, systems, and computer program products, recited in claims 18, 36, and 54, respectively, Osman discloses

static boundaries and that “Osman only discloses that the profile editor allows the user to *initially* edit or *initially* define a reminder profile.” PO Resp. 22–23 (citing Ex. 1005 ¶¶ 31, 32). Thus, Patent Owner concludes that “Osman does not explicitly disclose that an *initially* defined reminder boundary is *later* modified. And Osman does not describe its reminder boundaries as being ‘modified’ or ‘re-drawn’; indeed, these terms are not used in Osman’s disclosure to describe the reminder boundaries.” *Id.* at 27 (citations omitted).

Petitioner counters that Mr. Williams “erroneously contends that the words ‘define’ and ‘edit’ have the same meaning in Osman.” Pet. Reply 14 (citing Ex. 1015, 119:25–120:6); *see* Ex. 1029 ¶¶ 46–47. Consequently, Patent Owner, relying on Mr. Williams’s testimony, concludes that Osman’s disclosure is limited to “initially editing” and “initially defining” boundaries. Pet. Reply 14–15; *see* PO Resp. 23. Petitioner argues that Osman’s disclosure is not limited to “initially” editing or defining, but, even if it were, Petitioner argues that a person of ordinary skill in the art “would understand that the user would be able to make changes *during* the definition of the reminder profile prior to saving the initial definition.” Pet. Reply 15 (citing Ex. 1029 ¶¶ 49–50).

Both parties appear to apply a narrow construction to the terms of claims 18, 36, and 54 requiring that these methods, systems, and computer program products *both* receive and process (e.g., update or display) “modifications to the boundary.” The recited claim language, however, merely requires “*receiving* modifications to the boundary.” *E.g.*, Ex. 1001, col. 7, ll. 60–63 (claim 18; emphasis added). The Specification of the ’713 patent clearly distinguishes between *receiving* and *processing* such

modifications. Ex. 1001, col. 5, ll. 11–14. Thus, we find that the ability to modify boundaries by “dragging” is merely exemplary. As long as the “modifications to the boundary” are *received*, the recitation of the claims is satisfied. Pet. 28–29 (claim 18), 32 (claim 36), 34 (claim 54); *see* Ex. 1005 ¶¶ 31–32, 35; Fig. 1. Therefore, on this record, we are persuaded that Osman discloses the additional elements of claims 18, 36, and 54.

Again, we have addressed Patent Owner’s challenge to Dr. Rhyne’s technical experience above (*see supra* Section III.A.), and we give Dr. Rhyne’s testimony appropriate weight in view of our conclusions regarding his credentials, the assessment of the level of skill in the art, and the quality of and support provided for his testimony. *See Yorkey*, 601 F.3d at 1284.

Therefore, we are persuaded that, on this record, Petitioner has demonstrated by a preponderance of the evidence that claims 18, 36, and 54 of the ’713 patent are unpatentable as anticipated by Osman.

d. Dependent Claims 2, 3, 7, 9–12, 14–16, 20, 21, 25, 27–30, 32–34, 38, 39, 43, 45–48, and 50–52

Regarding the remaining dependent claims, claims 2, 3, 7, 9–12, 14–16, 20, 21, 25, 27–30, 32–34, 38, 39, 43, 45–48, and 50–52, Petitioner provides a detailed mapping of each and every element of these claims onto the disclosure of Osman. Pet. 24–34. Patent Owner does not contest the mapping of these claims individually, but merely relies on its general contentions opposing Petitioner’s application of the disclosure of Osman to independent claims 1, 19, and 37 (PO Resp. 1–3) and its general challenge to the relevant technical experience of Dr. Rhyne and to the weight that should be given to his testimony (*id.* at 30–32). *See* Paper 13, 3 (“The patent owner is cautioned that any arguments for patentability not raised in the response

will be deemed waived.”). We have addressed Patent Owner’s challenge to Dr. Rhyne’s technical experience above (*see supra* Section III.A.), and we give Dr. Rhyne’s testimony appropriate weight in view of our conclusions regarding his credentials, the assessment of the level of skill in the art, and the quality of and support provided for his testimony. *See Yorkey*, 601 F.3d at 1284. We find Dr. Rhyne’s testimony regarding Osman’s disclosure and the mapping of the elements of these dependent claims onto Osman’s disclosure credible, persuasive, and unrebutted. Consequently, we are persuaded that, on this record, Petitioner has demonstrated by a preponderance of the evidence that claims 2, 3, 7, 9–12, 14–16, 20, 21, 25, 27–30, 32–34, 38, 39, 43, 45–48, and 50–52 are unpatentable as anticipated by Osman.

3. Conclusion

On this record, we are persuaded that Petitioner has established by a preponderance of the evidence that claims 1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, 43, 45–48, and 50–54 of the ’713 patent are unpatentable as anticipated by Osman.

B. Claims 4–8, 22–26, and 40–44 as Rendered Obvious Over Osman and Suzuki

Petitioner argues that claims 4–8, 22–26, and 40–44 are unpatentable under 35 U.S.C. § 103(a) as obvious over Osman and Suzuki. Pet. 34–39.

1. Suzuki (Ex. 1006)

Suzuki discloses “[a] system and method for alerting a user of an item on a to-do list if the user is detected to be close to the item’s performance location.” Ex. 1006, Abstract. Suzuki’s Figure 8A is reproduced below:

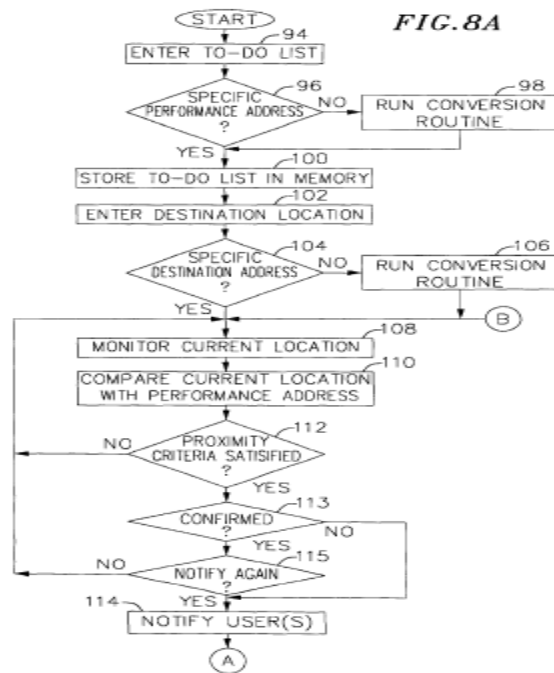


Figure 8A depicts a flow diagram of an interactive to-do list item notification software program. *Id.* at col. 3, ll. 16–17. Suzuki’s methods, as depicted in this flow diagram, begin with entry of a to-do list (step 94), which includes receiving a message (e.g., a “task description”) and a specification of a performance address (step 96). *See id.* at col. 8, ll. 1–26, Figs. 7, 8A. At step 108, Suzuki then teaches monitoring the user’s current location. *Id.* at col. 9, ll. 11–18. If the user is not in proximity to the specified performance address (step 112 (“No” decision)), monitoring of the user’s current location continues. *Id.* at col. 8, l. 46–col. 9, l. 33. Alternatively, if the user is in proximity to the specified performance address (step 112 (“Yes” decision)), “the user is alerted of the task by displaying the task description . . . on the mobile terminal’s screen.” *Id.* at col. 9, ll. 58–62. Suzuki also discloses “a flashing task description along with a ‘beeping’ noise or vibration.” *Id.* at col. 9, ll. 64–67.

2. Analysis

Petitioner provides a detailed mapping of the limitations of challenged claims 4–8, 22–26, and 40–44 not taught explicitly by Osman on the teachings of Suzuki, including detailed claim charts and an explanation of its arguments regarding the mapping of those limitations on Suzuki. Pet. 34, 37–39; *see* Ex. 1010 ¶¶ 232–235, 237, 238, 240–242, 244–246, 248–250, 252–255, 257, 258, 260, 261, 263, 264, 266, 267, 269, 270, 272, 273, 275, 276, 278, 279, 281, 282, 284, 285. Patent Owner does not challenge the mapping of the limitations of these claims onto the teachings of Suzuki.⁷ PO Resp. 27. We are persuaded by Petitioner’s mapping of the underlying base claims (i.e., independent claims 1, 19, and 37) on the teachings of Osman (*see supra* Section IV.A.) and of these challenged claims on the teachings of Osman and Suzuki (Pet. 34, 37–39), and we expressly adopt those mappings here.

Although Patent Owner does not challenge Petitioner’s mapping of the limitations of challenged claims 4–8, 22–26, and 40–44 on the teachings of Osman and Suzuki, Patent Owner contends that “the incorporation of Suzuki’s messages into Osman’s reminder system changes a principle of operation of Osman” and, thus, would be an improper combination of the teachings of Osman and Suzuki. PO Resp. 27 (citing Ex. 2001 ¶ 68); *see* Manual of Patent Examining Procedure § 2143.01(VI) (“If the proposed

⁷ With the exception of claims 7, 25, and 43, Patent Owner did not challenge Petitioner’s mapping of the limitations of these claims onto Suzuki’s teachings during the preliminary proceeding. *See* Prelim. Resp. 15–16, 30–36. For purposes of the Decision on Institution, we did not find those challenges persuasive (Dec. on Inst. 28–29), and Patent Owner does not renew those challenges in the Patent Owner Response (*see* Paper 13, 3).

modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.”).⁸ Petitioner argues that Osman teaches a method for providing location-based notifications and Suzuki teaches a similar method for alerting a user of an item on a to-do list based on the user’s location. Pet. 36. Consequently, Osman and Suzuki are in the same field of endeavor. See, e.g., Ex. 1005 ¶¶ 3, 12; Ex. 1006, col. 1, ll. 61–64. Further, Suzuki teaches providing such alerts “by means of a visual display, audio signal, vibrating alert, and/or a message alert.” Pet. 36. Thus, Petitioner argues that “[c]ombining Osman with Suzuki would have involved applying the known techniques of presenting an alert on a mobile terminal with a visual display, audio signal, vibrating alert, and/or a message alert, as taught by Suzuki, in order to present an alert, which would enhance Osman’s location-based reminder notifications.” Pet. 36–37 (citing Ex. 1010 ¶¶ 232, 236); see *KSR*, 550 U.S. at 417.

Specifically, Patent Owner contends that:

To conserve radio interface resources, a principle of operation in Osman is to avoid the transmission of messages: “Therefore, another advantage is that a radio interface located between the network and any terminal is not blocked by message delivery using traffic channels for speech and/or data. Rather, a

⁸ We note that the concepts of the establishment of a *prima facie* case of obviousness and its subsequent rebuttal (i.e., burden-shifting framework) are appropriate in the prosecution context, but with a few limited exceptions are not appropriate in the context of an *inter partes* review where the burden of showing unpatentability rests and remains with the petitioner. See *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

transmission concerns only signaling channels via the air interface/radio interface.”

PO Resp. 27–28 (quoting Ex. 1005 ¶ 17; citing Ex. 2001 ¶ 68). Patent Owner contends, however, that:

Suzuki’s confirmation and completion status messages can be in the form of electronic mail, instant messages, and other similar types of electronic messages. [Ex. 2001 ¶ 70.] These electronic messages are similar to the messages in document WO-A-00/41413 [referred to in Osman’s Background (Ex. 1005 ¶ 11)]: the same type of messages that Osman avoids due to the problems with radio resource issues. [Ex. 2001 ¶ 70; Ex. 2004 54:10–20.]

PO Resp. 29. Based on Osman’s teaching of the undesirability of transmitting messages and the message transmission taught by Suzuki, Patent Owner contends that a person of ordinary skill in the art would not have combined the teachings of these references in the manner proposed by Petitioner. *Id.*

Petitioner disagrees and argues that its arguments presented in the Petition are not based on the transmission of messages, such as those described in Suzuki, in Osman’s system. Pet. Reply 16.

Petitioner instead offered Suzuki’s teachings only to disclose different techniques for “presenting information related to an alert”—specifically, that the presentation of such an alert could be visual (claims 4, 22 and 40), auditory (claims 5, 23 and 41), vibrational (claims 6, 24 and 42); that the information that is presented to the user could include transmitting information (claims 7, 25 and 43), or constitute a message (claims 8, 26 and 44). *See* Petition, 34-39 (citing Ex. 1006, 7:15-31, 8:1-26; 9:58-62; 9:61-67; FIGS. 7, 8A); Ex. 1029, ¶ 53.

Id. Specifically, Petitioner argues that Patent Owner fails to show that the combination of Osman and Suzuki would change Osman’s principle of operation for three reasons. *Id.* at 17–23.

First, Petitioner argues that “Patent Owner incorrectly uses the term ‘message’ to refer exclusively to signals travelling over a cellular traffic channel and contends that ‘the incorporation of Suzuki’s messages into Osman’s reminder system changes a principle of operation of Osman.’” Pet. Reply 17 (citing PO Resp. 27). Instead, Petitioner argues that the Specification of the ’713 patent refers to text, recorded sounds, or other information that may be stored locally and presented to a user when an alert occurs. *Id.* (citing Ex. 1001, col. 4, ll. 30–38; Ex. 1029 ¶ 52). Suzuki similarly teaches a “task description” that either may be *sent* over a wireless network using what Patent Owner refers to as “messaging” (e.g., cellular messaging), or *stored* locally in the mobile terminal and displayed without any use of cellular message transmission. *Id.* (citing Ex. 1006, col. 8, ll. 1–7 (“FIG. 7 is an illustration of a screen display 70 for entering a to-do list to *either the host computer 14 or the mobile terminal 10* as the situation might be. The screen display 70 provides for a ‘Task Description’ area 72 for entering a description of a to-do list item.” (emphasis added)), Fig. 7); *see* Ex. 1005 ¶ 11 (avoid transmitting “messages”); Ex. 1029 ¶¶ 53–54; *see also* Ex. 1006, col. 8, ll. 57–67 (“the program stores the to-do list in the mobile terminal’s memory 10f”). Thus, Petitioner argues – and we agree – that the challenged claims of the ’713 patent do not require the transmission of messages and Suzuki’s notifications need not be transmitted, but may be recalled on a local terminal in response to an alert.

In addition, Petitioner argues that, contrary to Patent Owner’s contention, Osman does not always seek to avoid use of cellular messages, as Patent Owner contends. Pet. Reply 17–18 (citing PO Resp. 27–29). Instead, Petitioner contends that, in some embodiments, Osman teaches the

use of cellular “messages,” as that term is used by Patent Owner, and that such messages are used to send notification *texts*. *Id.* In particular, Osman describes that:

Another situation where the invention may be used *in a wireless network is where the network stores the user’s request for being reminded in a database*, i.e. the user specifies the location and/or the profile of proximity to the location to provide the indication (*also, the message/notification could be specified*), and if the current location matches the specified location and/or profile, *the wireless network supplies the reminder indication to the user*. Furthermore, based on whether the user accepts or acknowledges the reminder indication, *the network further supplies other related information to the user’s terminal or to a third party’s terminal*.

Id. at 18 (quoting Ex. 1005 ¶ 9 (emphases added by Petitioner)). Further, Patent Owner’s declarant, Mr. Williams, acknowledged that Osman allows the type of messaging described in Suzuki. *Id.* (citing Ex. 1015, 139:4–141:12); *see id.* at 18–19 (citing Ex. 1029 ¶ 56). Thus, we are persuaded that, to the extent that Osman seeks to avoid transmitting messages, the recalling of stored notifications by Suzuki in response to alerts does not make the combination of the teachings of Osman and Suzuki improper. *See* Ex. 1005 ¶ 17; Ex. 1006, col. 8, ll. 57–67. Moreover, there is credible evidence that certain embodiments of Osman envision the transmission of “messages” in a manner similar to the transmission of notifications stored on Suzuki’s host computer. *Compare* Ex. 1005 ¶ 9, *with* Ex. 1006, col. 8, ll. 1–7.

Second, Petitioner argues that Osman’s “reminders” do not require “messages,” as that term is defined by Patent Owner. Pet. Reply 19–22. As noted above, “the presentation of such an alert could be *visual* (claims 4, 22 and 40), *auditory* (claims 5, 23 and 41), *vibrational* (claims 6, 24 and 42);

that the information that is presented to the user could include *transmitting information* (claims 7, 25 and 43), or constitute a message (claims 8, 26 and 44).” *Id.* at 16 (emphases added). Thus, Petitioner argues that combining Suzuki’s techniques for presenting alerts with the teachings of Osman’s system (e.g., Suzuki’s teaching of visual, auditory, and vibrational alerts) would have nothing to do with cellular messaging. *Id.* at 19 (citing Ex. 1029 ¶ 54). Therefore, at least with respect to the limitations recited in claims 4–7, 22–25, and 40–43, the transmission of “messages” is not required, and, even if Osman operates on a principle that seeks to avoid the transmission of messages, such a principle is not relevant to the combination of the teachings of Osman and Suzuki with respect to challenged claims other than claims 8, 26, and 44. *Id.* at 20–21. Again, we agree with Petitioner.

Third, Petitioner argues that claims 8, 26, and 44 recite the step of “*receiving* a message, and wherein the information *relating to the alert* includes the message.” *E.g.*, Ex. 1001, col. 7, ll. 26–28 (emphases added). Thus, even if Osman operates on a principle that seeks to avoid the *transmission* of messages, such a principle is not contrary to the combined teaching of Osman and Suzuki. Pet. Reply 22–24. As noted above, Suzuki specifically provides for the *storage* of the “task description” (i.e., “information relating to the alert”) on a mobile terminal. See Ex. 1006, col. 8, ll. 1–3. Not only does the language of claims 8, 26, and 44 not require “transmission” of a “message,” Suzuki describes a receipt of a notification that does not require transmission of a “message.” Pet. Reply 23. Therefore, we are persuaded that even with respect to claims 8, 26, and 44, the combination of the teachings of Osman and Suzuki would not improperly alter a principle of Osman’s operation.

In addition to these specific challenges to the reasons for combining the teachings of Osman and Suzuki, Patent Owner generally challenges the relevant technical experience of Dr. Rhyne and the weight that should be given to his testimony (PO Resp. 30–32). *See* Pet. Reply 24. We are persuaded by Petitioner’s arguments regarding the reasons for combining the teachings of Osman and Suzuki, and, we have addressed Patent Owner’s challenge to Dr. Rhyne’s technical experience above (*see supra* Section III.A.), and we give Dr. Rhyne’s testimony appropriate weight in view of our conclusions regarding his credentials, the assessment of the level of skill in the art, and the quality of and support provided for his testimony. *See Yorkey*, 601 F.3d at 1284.

3. Conclusion

On this record, we are persuaded that Petitioner has established by a preponderance of the evidence that claims 4–8, 22–26, and 40–44 are unpatentable as rendered obvious over the teachings of Osman and Suzuki.

C. Claims 13, 31, and 49 as Rendered Obvious Over Osman and Seligmann

As noted above, challenged claims 13, 31, and 49 depend directly from independent claims 1, 19, and 37, respectively; and each of these dependent claims recites “determining that a difference between the first current time and the second current time exceeds a threshold.” *See, e.g.*, Ex. 1001, col. 7, ll. 44–45 (claim 13). For the reasons given in the Decision on Institution, we were not persuaded that Osman discloses each and every element of claims 13, 31, and 49. Dec. on Inst. 21–22. Nevertheless, Petitioner argues that, “if the disclosure of Osman is deemed by the Board to be inadequate in this regard, Seligmann (titled “Location-based to-do list reminders”) discloses more detailed teachings of time- and distance-based

thresholds associated with alerts.” Pet. 44. For purposes of the Decision on Institution, we agreed. Dec. on Inst. 30–33.

1. *Seligmann (Ex. 1008)*

Seligmann discloses methods and apparatus for determining when to remind a user about a task in a to-do list. Ex. 1008, Abstract. Such reminders may be based on the user’s current geographic location or, optionally, on a priority assigned to the task and/or a due date. *Id.* ¶¶ 4, 5.

Seligmann’s Figure 1, including our annotations, is reproduced below:

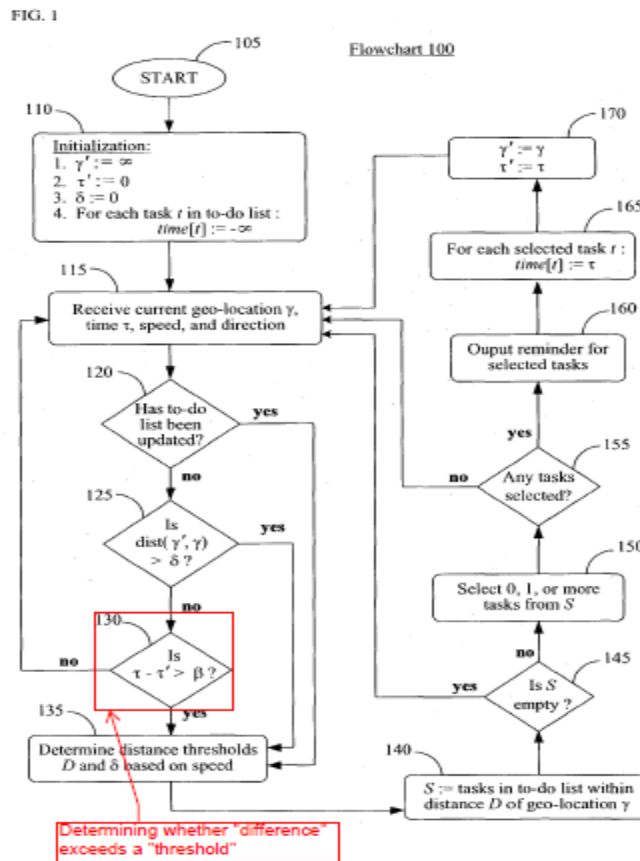


Figure 1 “depicts a flowchart of a method for determining whether to remind a user about one or more tasks in a to-do list, in accordance with the illustrative embodiment of the present invention.” *Id.* ¶ 8. Specifically,

Seligmann discloses that:

At task 130, the difference between time τ and time τ' is compared to a time threshold β , thus indicating whether more than $\tau - \tau'$ units of time have elapsed since the last reminder. If the determination is negative, then execution jumps back to task 115 for the next iteration of the method. The rationale for skipping to the next iteration is that no reminder needs to be generated when: (i) the to-do list has not been updated, (ii) the user has barely moved since the last reminder, and (iii) not enough time has elapsed since the last reminder to warrant issuing another reminder. If the determination is positive, then execution proceeds to task 135.

Id. ¶ 17 (emphasis added).

2. Analysis

Petitioner argues that Seligmann discloses the limitations of claims 13, 31, and 49 that are missing from Osman (Pet. 44–45 (citing Ex. 1008 ¶¶ 11, 12, 17, 18)), and that a person of ordinary skill in the art would have reason to combine the teachings of Osman and Seligmann to achieve the subject matter recited in claims 13, 31, and 49 (*id.* at 46). In view of Seligmann’s disclosures, quoted above, we are persuaded, on this record, that Seligmann teaches or suggests the limitations of claims 13, 31, and 49 missing from Osman. Further, with respect to the reason for combining the teachings of Osman and Seligmann, Petitioner argues that, as with Osman, Seligmann teaches “location-based alerting to users within the proximity of locations of ‘to-do’ list items.” Pet. 46 (citing Ex. 1008 ¶ 1).

Further, Petitioner argues that:

Osman discloses a “temporal reminder range” but does so in a more general manner than Seligmann’s particularized teachings, which disclose particular implementations of location-based alerts incorporating time-based thresholds in which the time

when a previous alert was issued is considered in determining whether to issue a subsequent alert.

Id. Thus, Petitioner argues that Osman and Seligmann share subject matter and that both are directed to providing spatial and temporal thresholds for triggering task alerts. *Id.* Consequently, Petitioner argues that combining the teachings of Osman and Seligmann would have involved “applying the known technique of implementing time thresholds to allow for multiple reminders to be generated at a specified interval while the user remains at a location specified for the alert.” *Id.* (citing Ex. 1010 ¶¶ 326, 329). As we noted in the Decision on Institution, using a known technique to improve a similar device in the same way likely would support a legal conclusion of obviousness. Dec. on Inst. 33 (citing *KSR*, 550 U.S. at 417). We adopt our earlier findings and analysis here.

The burden to prove the unpatentability of these challenged claims rests with Petitioner. On this record, we are persuaded (1) that Petitioner has shown by a preponderance of the evidence that Seligmann teaches or suggests the limitations of claims 13, 31, and 49 missing from Osman, and (2) that Petitioner has provided articulated reasoning with rational underpinning that would support the legal conclusion of obviousness with respect to these claims. *See KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Other than its general challenge to the relevant technical experience of Dr. Rhyne and to the weight that should be given to his testimony (PO Resp. 30–32), Patent Owner does not address this ground of unpatentability in the Patent Owner Response. Pet. Reply 2; *see* PO Resp. 1–3, 33; Paper 13, 3 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed

waived.”). We have addressed Patent Owner’s challenge to Dr. Rhyne’s technical experience above (*see supra* Section III.A.), and we give Dr. Rhyne’s testimony appropriate weight in view of our conclusions regarding his credentials, the assessment of the level of skill in the art, and the quality of and support provided for his testimony. *See Yorkey*, 601 F.3d at 1284. We find Dr. Rhyne’s testimony regarding the teachings of Osman and Seligmann credible, persuasive, and unrebutted.

3. Conclusion

On this record, we are persuaded that Petitioner has established by a preponderance of the evidence that claims 13, 31, and 49 are unpatentable as rendered obvious over the teachings of Osman and Seligmann.

V. CONCLUSION

For reasons stated above, we conclude that Petitioner has established by a preponderance of the evidence that claims 1–3, 7, 9–12, 14–21, 25, 27–30, 32–39, 43, 45–48, and 50–54 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Osman; claims 4–8, 22–26, and 40–44 are unpatentable under 35 U.S.C. § 103(a) as rendered obvious over the teachings of Osman and Suzuki; and claims 13, 31, and 49 are unpatentable under 35 U.S.C. § 103(a) as rendered obvious over the teachings of Osman and Seligmann.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–54 of the ’713 patent are held unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must

IPR2015-01965
Patent 7,884,713 B1

comply with the notice and service requirements of 37 C.F.R. § 90.2.

PETITIONER:

William H. Mandir
Brian K. Shelton
SUGHRUE MION PLLC
wmandir@sughrue.com
bshelton@sughrue.com

PATENT OWNER:

Robert Greene Sterne
Jason D. Eisenberg
Michael V. Messinger
Christian A. Camarce
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
rsterne@skgf.com
jasone-PTAB@skgf.com
mikem-PTAB@skgf.com
ccamarce-PTAB@skgf.com