

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE, INC. and  
LG ELECTRONICS, INC.,  
Petitioner,

v.

CORE WIRELESS LICENSING S.A.R.L.,  
Patent Owner.

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Case IPR2015-01714  
Patent 7,072,667 B2

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Before LYNNE E. PETTIGREW, CHRISTA P. ZADO, and  
JESSICA C. KAISER, *Administrative Patent Judges*.

ZADO, *Administrative Patent Judge*.

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

## I. INTRODUCTION

We have authority to hear this *inter partes* review under 35 U.S.C. § 6, and this Final Written Decision (“Decision”) is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Google Inc. and LG Electronics, Inc. (collectively, “Petitioner”) have shown claims 12–14 of U.S. Patent No. 7,072,667 B2 (Ex. 1001, “the ’667 patent”) to be unpatentable. See 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). We determine further that Petitioner has not shown claim 15 of the ’667 patent to be unpatentable.

### A. Procedural History

Petitioner filed a Petition (Paper 3, “Pet.”) to institute *inter partes* review, and Core Wireless Licensing S.A.R.L. (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”). On February 18, 2016, we instituted an *inter partes* review of claims 12–15 of the ’667 patent. Paper 8 (“Dec. to Inst.”). Patent Owner filed a Response (Paper 12, “PO Resp.” or “Response”), and Petitioner filed a Reply (Paper 15, “Reply”). A transcript of an oral hearing held on November 2, 2016 (Paper 20) has been entered into the record.

### B. Related Proceedings

Petitioner informs us that Patent Owner has asserted the ’667 patent against LG Electronics, Inc. and LG Electronics MobileComm USA in the litigation styled *Core Wireless Licensing S.a.r.l. v. LG Electronics, Inc.*, 2:14-cv-00911 (E.D. Tex.), filed September 26, 2014, which has been consolidated with *Core Wireless Licensing S.a.r.l. v. LG Electronics, Inc.*, 2:14-cv-00912 (E.D. Tex.). Pet. 1–2; see also Paper 6, 2. The parties inform us that the ’667 patent is also at issue in the following proceeding:

*Core Wireless Licensing S.a.r.l. v. Apple Inc.*, 6:14-cv-00751 (E.D. Tex.).  
Pet. 1–2; Paper 6, 2.

Petitioner has also filed another petition for *inter partes* review of the '667 patent (IPR2015-01715). Pet. 2; Paper 6, 2.

The '667 patent also is subject to *inter partes* review in IPR2015-01896.

### C. The '667 Patent

The '667 patent is titled “Location Information Service For A Cellular Telecommunications Network,” and generally relates to a method and system for providing location finding information to a mobile station independently of a vendor. Ex. 1001, 1:52–65. Figure 1 of the '667 patent is reproduced below:

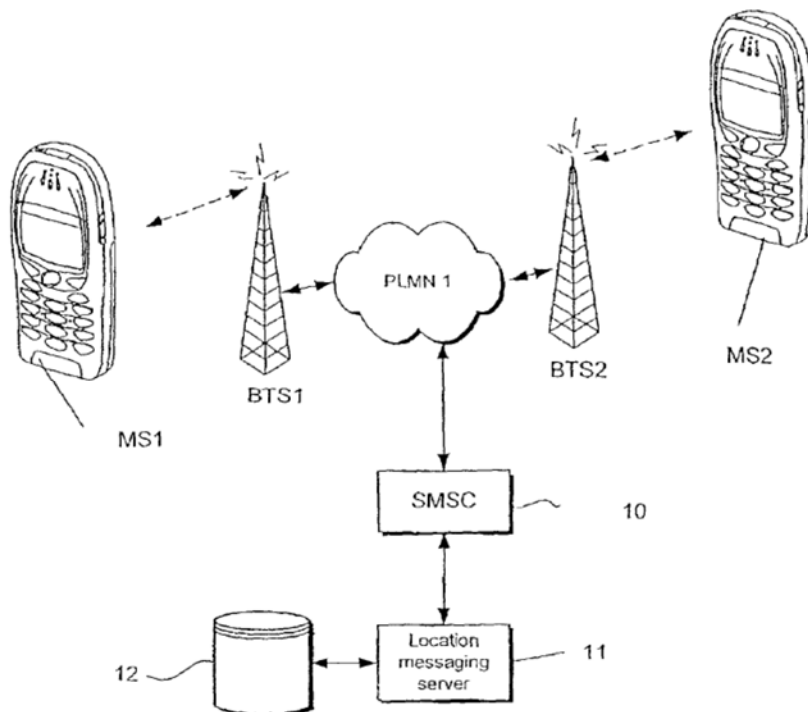


Fig. 1

Figure 1 depicts a cellular telecommunications network including public land mobile network PLMN1 that provides cellular service to mobile stations MS1 and MS2 via base transmitter stations BTS1 and BTS2. Ex. 1001, 2:62–3:3. Figure 1 further depicts short message service (SMS) center SMSC 10 connected to PLMN1 for processing SMS messages containing location information requests and responses, location messaging server 11, and database 12. *Id.* at 3:8–16. As shown in a timing diagram depicted in Figure 2, mobile station MS1 sends request 15, containing MS1’s telephone number and data category D1, D2, or D3 (corresponding to landmark data, railway stations, and restaurant data, respectively) to PLMN1 via BTS1. *Id.* at 3:41–65. PLMN1 generates and sends request 16, containing the identity of the cell (i.e., C1) in which MS1 is located, to SMSC 10. *Id.* SMSC 10 refers the request to location messaging server 11, which retrieves data stored in database 12 corresponding to cell C1 and data category D1, D2, or D3. *Id.* SMSC 10 then creates an SMS text message containing the retrieved data from database 12, and the text is routed back to the original requesting mobile station MS1. *Id.* at 3:66–4:12. The ’667 patent discloses that “[i]t will be understood that with the described system, there is no need to pre-register with the location service that may be provided free of charge by the network operator, or at the usual tariff for SMS messages.” *Id.* at 5:24–27. The ’667 patent specification describes additional optional features and embodiments.

#### *D. Illustrative Claims*

Claims 12 and 13 are independent, and claims 14 and 15 depend directly or indirectly from claim 13. Claim 12 is reproduced below:

12. A method of operating a mobile station to receive location information from a location finding service in a cellular telecommunications network, comprising:

sending a request for location finding information from a mobile station as a message through the network to a location message server; and

receiving from the location message server, a message containing the location finding information based on the cell occupied by at least one mobile station; and wherein

the method is performed without pre-registering the mobile station for the location finding service.

Claim 13 recites an apparatus, namely a mobile station, comprising circuitry operable to perform steps similar to those recited in claim 12. Claims 14 and 15, which depend from claim 13, further recite a display operable to display a message and circuitry operable to send a received message to another mobile station, respectively.

*E. Art Cited in Petitioner's Challenges*

Petitioner cites the following references in its challenges to patentability:

| Reference                    | Designation | Exhibit No. |
|------------------------------|-------------|-------------|
| U.S. Patent No. 6,442,391 B1 | Johansson   | 1003        |
| U.S. Patent No. 7,444,156 B2 | Boss        | 1004        |
| U.S. Patent No. 6,275,707 B1 | Reed        | 1005        |

*F. Grounds of Institution*

We previously instituted trial on the following grounds:

Claims 12–15 of the '667 patent under 35 U.S.C. § 103(a) as unpatentable over Johansson and Boss; and

Claim 15 of the '667 patent under 35 U.S.C. § 103(a) as unpatentable over Johansson, Boss, and Reed.

Dec. to Inst. 19.

## II. DISCUSSION

### A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their “broadest reasonable construction in light of the specification of the patent” in which they appear. 37 C.F.R. § 42.100(b); *see also* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2141–46 (2016). The terms also generally are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). We determine “location finding information” is the only term we need interpret to resolve the controversy before us. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Claim 12 recites a method comprising “sending a request for location finding information from a mobile station,” and claim 13 recites a similar limitation, i.e., “circuitry operable to send a request for location finding information from a mobile station.” The parties dispute whether position information, such as latitude and longitude or GPS coordinates, is sufficient to satisfy the term “location finding information.” PO Resp. 13–15; Reply 1–6. In particular, Patent Owner argues that “location finding information” is “not merely the geographic location of that [] mobile station,” but rather is information such as landmark data, railway station data, and restaurant data associated with the location of the mobile station.

PO Resp. 15. For the reasons we discuss below, we determine that “location finding information” encompasses position information.

Position information such as latitude and longitude or GPS coordinates, or geographical location, falls within the ordinary and customary meaning of “location finding information” because it is information that may be used to find a location. Neither the claim language nor the ’667 patent specification limits the term “location finding information” so as to exclude position information. Independent claim 1, like claim 12, recites “a request for location finding information.” Claim 2 depends from claim 1 and further recites that the request is a request for data “concerning [the mobile station’s] own location.” Patent Owner does not directly interpret the term “concerning,” but suggests that data concerning location encompasses landmark data, railway station data, and restaurant data associated with the location of the mobile station, but excludes position data. PO Resp. 15. The express words of the claims, however, do not exclude position data. Neither does the ’667 patent specification, which provides non-limiting examples of informational data about a location but does not exclude position data. Ex. 1001, 3:52–55 (“[D]ata . . . may be arranged as shown in Table 1, in which landmark data corresponding to individual cells is stored, together with other data relevant to the cells such as local restaurants, railway stations *and the like*.” (emphasis added)). The description “and the like” suggests that other data about a location, such as position data, may also be returned to a mobile station in response to a request for location finding information.

Patent Owner also suggests that during prosecution of the ’667 patent, the claims were amended and distinguished over the prior art so as to

exclude geographical location from being within the scope of the term “location finding information.” PO Resp. 14. We disagree with Patent Owner. The amendment to which Patent Owner refers, and accompanying argument during prosecution, changed “location information service” to “location finding service” because, according to applicant’s argument, the prior art did not describe a service that finds the location of a mobile station, but instead described a service in which a mobile station transmits its location to a service provider. Ex. 1002, 40.<sup>1</sup> The amendment and argument made during prosecution, therefore, related to whether the prior art described finding a location versus providing a location, and did not narrow the term “location finding information” to exclude geographical location or other position information.

Accordingly, we determine that “location finding information” includes position information, such as latitude and longitude or GPS coordinates, or geographical location. We note that our interpretation is consistent with Patent Owner’s interpretation in a district court proceeding, where a narrower claim construction standard applies. In the district court proceeding, Patent Owner asserted in its infringement contentions that latitude and longitude of a mobile user’s position satisfies the claim element “location finding information.” Ex. 1013, 11–15.

### *B. Principles of Law*

To prevail in its challenges to the patentability of the claims, Petitioner must prove its propositions by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Section 103 of Title 35, U.S. Code,

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<sup>1</sup> We cite to the Bates number of Exhibit 1002 provided by Petitioner.

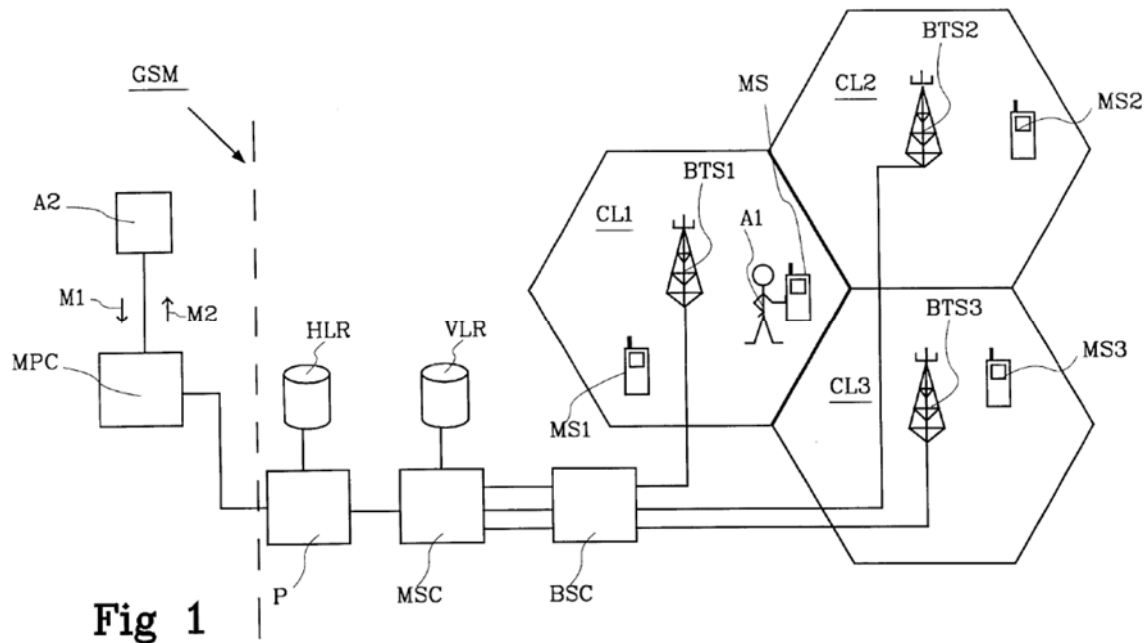
“forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103).

*C. Asserted Obviousness Based on Johansson and Boss*

Petitioner asserts that independent claims 12 and 13 of the ’667 patent, and claims 14 and 15 depending directly or indirectly from claim 13, would have been obvious over the combination of Johansson and Boss. Pet. 47–54; Reply 7–20. Petitioner proffers a Declaration of Dr. Chris G. Bartone to support its assertions. Ex. 1008. Patent Owner disputes Petitioner’s contentions, arguing that the claims are patentable over Johansson and Boss. PO Resp. 17–36. We have reviewed the record, and we determine that the record supports Petitioner’s contentions with respect to claims 12–14, and we adopt Petitioner’s contentions discussed below as our own. For reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 12–14 are unpatentable over Johansson and Boss. We determine that Petitioner has not demonstrated, by a preponderance of the evidence, that claim 15 is unpatentable over Johansson and Boss.

*1. Overview of Johansson (Ex. 1003)*

Johansson teaches methods and systems for determining the geographic location of a mobile station in a mobile communications system. Ex. 1003, Abstract. Figure 1 of Johansson is reproduced below.



Ex. 1003, Fig. 1. Figure 1 depicts a mobile communications system that includes mobile stations MS1, MS2, and MS3 in communication with base stations BTS1, BTS2, and BTS3, located in cells CL1, CL2, and CL3, respectively. *Id.* at 4:16–27. Figure 1 further depicts mobile services switching center MSC, mobile locating node MPC, and second party A2. *Id.* at 4:29–65. Johansson discloses, in pertinent part, forwarding a request by party A2 to mobile locating node MPC for information concerning the location of mobile station MS. *Id.* at 5:34–39. In response, mobile locating node MPC sends a command to collect locational data to the mobile switching center MSC serving mobile station MS at that time. *Id.* at 5:40–6:1. In one embodiment, locational data is collected by “measuring the wave propagation delay between the mobile station MS and one or more of the base stations BTS1–BTS3.” *Id.* at 12:8–12. Alternatively, locational data collection may require disclosure of the traffic areas within which the mobile station MS is located, wherein a traffic area is comprised of one or

more cells CL1–CL3. *Id.* at 12:12–16. The locational data is forwarded to mobile locating node MPC, which determines the location of mobile station MS with the aid of the locational data received, and then forwards the results to party A2 in message M2. *Id.* at 6:3–6.

## 2. Overview of Boss (*Ex. 1004*)

Boss teaches a user-controlled cellular phone position feature for allowing a cell phone user to correlate a user-specified location name with a cell phone location. *Ex. 1004*, Abstract. Boss discloses that a cellular telephone user, independently of a cellular telephone system operator, can obtain location information about a cellular phone. *Id.* at 7:21–23. In one embodiment, cellular telephone 60 sends an encrypted text location message containing location information about itself to location service center 160, which stores the message. *Id.* at 6:53–56. Location service center 160 transmits the location information in the location message to recipient 162 in response to a query from recipient 162 for cellular telephone 60's location information. *Id.* at 7:7–12. Recipient 162 may be a cellular telephone user. *Id.* at 7:21–28.

## 3. Analysis

In the Petition, Petitioner specifies how the combination of Johansson and Boss teaches or suggests a mobile station sending a request for location finding information to a location message server and receiving a message based on the cell occupied by the mobile station containing the requested information from the location message server, wherein these steps are performed without the mobile station having to register for a location finding service, as recited in claim 12. *Pet. 47–48 (referring to id. at 17–29).*

- a. *Claim 12 — “sending a request for location finding information from a mobile station as a message through the network to a location message server”*

In a first alternative argument, Petitioner argues that Johansson alone teaches or suggests the claimed step of “sending a request for location finding information from a mobile station as a message through the network to a location message server.” *Id.* at 47–48. Petitioner argues that Johansson’s disclosure of sending a request from a service provider associated with A2 as a message over a network for a service that requires the geographic location of mobile station user A1 (such as a service that provides the location of the nearest hamburger restaurant) satisfies this step. *Id.* at 18–19, 47–48. According to Petitioner, data such as the location of the nearest hamburger restaurant is “location finding information” as claimed. *Id.* at 18–19. Petitioner argues that Johansson’s mobile locating node MPC corresponds to the claimed “location message server.” *Id.* at 19.

Petitioner’s arguments that Johansson alone discloses the claim recitation at issue are not persuasive because the request for what Petitioner identifies as “location finding information” (e.g., a request for services that return data such as the location of the nearest hamburger restaurant) is not sent to what Petitioner identifies as being a location message server (e.g., mobile locating node MPC), as required by claim 12. *Id.* at 19 (citing Ex. 1003, 9:21–33, Fig. 6 (steps E1–E2)). Johansson discloses that mobile station A1 sends the request for services (for data such as the location of the nearest hamburger restaurant) to the service provider, rather than to mobile locating node MPC. Ex. 1003, 9:28–36. Petitioner does not identify any teaching or suggestion in Johansson that a request for information such as the location of the nearest hamburger restaurant is sent to mobile locating

node MPC. *See, e.g.*, Pet. 18–19. Indeed, Johansson suggests that such a request is not sent to mobile locating node MPC. Johansson discloses that the request for services that require knowing the location of a mobile station is sent to a service provider. Ex. 1003, 9:28–32. The service provider responds by requesting from mobile locating node MPC the geographical location of the mobile station. *Id.* at 9:33–35. If permission is granted, mobile locating node MPC sends the geographical location of the mobile station to the service provider. *Id.* at 9:58–60. Accordingly, Petitioner has not demonstrated that Johansson alone teaches or suggests the limitations of claim 12.

Petitioner proffers a second alternative argument in which the geographical location of the mobile station is the “location finding information.” Pet. 20. With respect to this argument, Petitioner relies in part on Johansson’s disclosure of a service provider associated with A2 sending a request for the geographical location of a mobile station as a message through a network to mobile locating node MPC. *Id.* at 19–20. The parties do not dispute that the service provider associated with A2 sends a request for this information as a message over a network to a location message server. Patent Owner disputes, however, that the geographical location of a mobile station is within the scope of the claim term “location finding information.” PO Resp. 19. For reasons we discussed above with respect to claim interpretation, we agree with Petitioner that Johansson’s request for the geographical location of a mobile station is a request for “location finding information,” as claimed. Also, because mobile locating node MPC receives a request for, and sends, location finding information,

Petitioner has shown that mobile locating node MPC satisfies the claim element “location message server.”

Petitioner acknowledges that in Johansson the party sending the request to mobile locating node MPC for geographical location, namely a service provider associated with A2, is not a mobile station as required by claim 12, and that Johansson does not expressly disclose a mobile station sending a request to mobile locating node MPC for geographical location. Pet. 20. Petitioner asserts, however, that it would have been obvious to a skilled artisan at the time of the invention of the '667 patent for a mobile station in Johansson to send a request for its own location or the location of another mobile station to mobile locating node MPC. *Id.* at 20–22. In support of its assertion, Petitioner argues that Johansson discloses that mobile stations can request services that require knowing the geographical location of a mobile station, such as the location of the hamburger restaurant nearest to the mobile station. *Id.* at 21 (citing Ex. 1003, 4:20–23, 9:21–27, Fig. 1). Petitioner does not identify any express disclosure in Johansson that the requested information is the geographical location itself.

Petitioner, however, relies on Boss for this feature. Pet. 20–21. Boss, like Johansson, teaches a cellular telephone sending requests for services that require knowing a cellular telephone's location and that provide information in response to the request (including instructions to get to a destination). Boss, unlike Johansson, expressly discloses that the request be for the current location, e.g., geographical location, of the cellular telephone. *Id.* (citing Ex. 1004, 7:29–32, Fig. 7). Petitioner argues that Boss teaches that a benefit of using cellular telephones to make such requests is that a cellular telephone's mobility provides capabilities such as text messaging

that make it a convenient communication tool. Pet. 21–22 (citing Ex. 1004, 1:9–20, 7:45–48). According to Petitioner, modifying the mobile station in Johansson to request its own location or the location of another mobile station, as described in Boss, would have been an obvious modification. Pet. 22 (citing *KSR Int’l*, 550 U.S. at 417).

We find Petitioner’s arguments to be persuasive. As we discussed above, both Johansson and Boss describe a mobile station/cellular telephone that sends requests for services that require knowing the geographical location of a mobile station/cellular telephone and that provide information about the location of a mobile station/cellular telephone. Johansson provides examples of such services, including services that provide a route description or the location of the nearest hamburger restaurant. Ex. 1003, 9:21–27. The examples enumerated in Johansson are not exhaustive, but rather are provided as examples of services that require knowing the location of a mobile station. *Id.* We, therefore, are persuaded that a skilled artisan at the time of invention would have understood that the system in Johansson would include location services in addition to the two enumerated examples. Boss provides examples of additional location services that require knowing the location of a cellular telephone, including services that provide the location of the cellular telephone itself. Because Boss’s location service is of the type disclosed in Johansson, we are persuaded a person of ordinary skill would have found it obvious to modify the mobile station in Johansson to request its own location or the location of another mobile station, as described in Boss, to use such a location to find nearby services (e.g., the location of the nearest hamburger restaurant disclosed in Johansson). We are persuaded, therefore, that it would have been obvious for the location

services provided in Johansson to include a service that provides the geographical location of a mobile station.

- b. *Claim 12 — “receiving from the location message server, a message containing the location finding information based on the cell occupied by at least one mobile station”*

With respect to claim 12’s recitation “receiving from the location message server, a message containing the location finding information,” Petitioner relies on Johansson’s disclosure that the service provider associated with A2 receives a message M2 from mobile locating node MPC, wherein the message includes the geographical location of a mobile station. Pet. 24. Petitioner relies on mobile locating node MPC for the limitation “location message server” and the geographical location of a mobile station for “location finding information.” *Id.* at 20. For reasons we discussed above, we are persuaded that Johansson’s mobile locating node MPC satisfies the claim element “location message server,” and that the geographical location returned to the service provider in Johansson is “location finding information.” Petitioner also argues that Johansson suggests that mobile station MS associated with user A1, in response to sending a request for location finding services, receives a response. *Id.* at 24. In particular, Johansson discloses that services requested by mobile station MS user A1 may involve a route description or location of the nearest hamburger restaurant. *Id.* at 24–25 (citing Ex. 1003, 9:21–27; Ex. 1008 ¶¶ 32–33). We are persuaded that a skilled artisan would have understood that, because the location finding service is a service being offered to MS user A1, the service provides the requested route description or location of

the nearest hamburger restaurant to the requester, mobile station MS user A1.

With respect to claim 12's recitation concerning receiving a message containing location finding information "based on the cell occupied by at least one mobile station," Petitioner argues that the geographical location in Johansson is collected based on the cell that is occupied by the pertinent mobile station. Pet. 23–24; Reply 17–20. In particular, Petitioner relies on Johansson's disclosure that the geographical location of a mobile station is determined using locational data, wherein locational data is collected by the mobile switching center MSC serving the mobile station at the time. Pet. 23–24 (citing Ex. 1003, 12:5–16). One disclosed method of determining locational data is by determining the traffic area within which mobile station MS is located, wherein a traffic area is comprised of one or more cells. *Id.* (citing Ex. 1003, 12:5–16). Because geographical location (i.e., location finding information) is based on locational data, which is determined based on the cell occupied by the mobile station (i.e., the traffic area within which MS is located, wherein the traffic area comprises one cell), we are satisfied that Johansson teaches or suggests receiving a message containing location finding information that is "based on the cell occupied by at least one mobile station," as recited in claim 12.

*c. Claim 12 — "the method is performed without pre-registering the mobile station for the location finding service"*

With respect to the limitation that the method of claim 12 "is performed without pre-registering the mobile station for the location finding service," Petitioner argues that Johansson expressly discloses performing the claimed steps without pre-registering party A2 for a location finding service,

and that it would have been obvious in view of Boss to modify Johansson to also include a mobile station that need not pre-register. Pet. 28–29; Reply 11–15. For the limitation “without pre-registering,” Petitioner relies on Johansson’s disclosure of performing an authorization check to determine whether party A2 is entitled to obtain the location of mobile station MS. *Id.* at 28–29 (citing Ex. 1003, 6:26–32); *see also* Ex. 1003, 6:44–46. Johansson discloses that the aforementioned “entitlement must have earlier been registered in the mobile locating node MPC.” Ex. 1003, 6:33–52. Johansson discloses that one reason to perform the authorization check is to determine whether party A2 is able to be billed for the location finding service. Ex. 1003, 6:40–42. Johansson discloses, however, that the step of performing the aforementioned authorization check may be omitted such that party A2 is billed without having to pre-register for the location finding service. Pet. 28–29 (citing Ex. 1003, 11:31–39 (stating that one reason to omit the step of prior registration is so party A2 “can be billed without prior registration in the mobile locating node MPC”)). Accordingly, we agree that Johansson expressly discloses party A2 sending a request for a geographical location without pre-registering for this service with mobile locating node MPC.

Petitioner acknowledges that claim 12 requires that a *mobile station*, rather than party A2, send the request for geographical location without pre-registering, but argues that this feature would have been obvious in view of Boss. Pet. 28–29. In particular, Petitioner argues that a skilled artisan would have understood that a mobile station, just like party A2, also could send a request for location finding information without pre-registering. *Id.* at 29. In support of its argument, Petitioner points out, and we agree, that

nothing in Johansson requires making a record of whether the mobile device is permitted, e.g., pre-registered, to take part in a location finding service prior to making a request for location finding information. *Id.* In further support of its argument, Petitioner relies on its expert's opinion that a skilled artisan would have understood that pre-registration of a mobile device would not be needed because in Johansson only pre-registration of a service provider is described, but that even this is optional and may be omitted, and there is no requirement that a mobile station be pre-registered. Pet. 29 (citing Ex. 1008 ¶ 36). Based on the above, we determine a preponderance of the evidence, therefore, supports Petitioner's argument that Johansson and Boss collectively teach or suggest the "without pre-registering" limitation of claim 12.

Patent Owner counters that Johansson's disclosure of an embodiment in which party A2 is not pre-registered is immaterial because claim 12 requires that the mobile station is not pre-registered, and party A2 is not a mobile station. PO Resp. 26. As we discussed above, however, Petitioner provides evidence and persuasive argument that it would have been obvious to modify Johansson to implement party A2 as a mobile station. Pet. 19–22, 29; PO Resp. 26.

Patent Owner argues further that even if Johansson were modified to include a mobile station that sends requests for location finding information, the mobile station necessarily would need to be pre-registered for a location finding service because the mobile station whose location is requested has associated with it an indicator "I" indicating whether it permits its location to be divulged. PO Resp. 26. According to Patent Owner, the setting of this indicator is a form of pre-registering for location finding services. *Id.* at 28.

We find this argument unpersuasive because it is not commensurate with the language of claim 12. Claim 12 requires that the mobile station that *sends the request* for location finding information not be pre-registered for location finding services. Here, Patent Owner refers to a feature relating to the mobile station whose location is requested, rather than the mobile station sending the request for location finding information, as required by claim 12. See Reply 11–12 (arguing that Patent Owner has not explained why the mobile station sending the request would use an indicator “I”). Also, Johansson’s disclosure distinguishes between indicator “I” and authorization checks to determine whether mobile station A1 permits its location information to be divulged to others (Ex. 1003, 4:66–6:21), and authorization checks carried out on party A2 to determine whether party A2 is authorized to send requests for information about other mobile stations (Ex. 1003, 6:26–32 (“The procedure followed in accordance with this method is similar to the procedure followed according to FIG. 4 [relating to checking “I”], but with the difference that authorization checks are carried out on the second party A2.”)). As we discussed above, it is the latter, optional check carried out on A2 that Petitioner relies on for disclosure of the “without pre-registering” claim limitation. Accordingly, Patent Owner’s argument does not support a finding that Johansson describes mandatory pre-registration of the mobile station that sends requests for location finding information.

A preponderance of the evidence, therefore, supports a finding that it would have been obvious in view of the teachings and suggestions of Johansson and Boss to modify Johansson to include a mobile station that

sends requests as claimed without pre-registering for a location finding service.

The parties also make arguments with regard to whether we should construe the limitation “without pre-registering” as a negative limitation. Pet. 29; PO Resp. 31–34; Reply 15–17. In particular, the parties dispute whether the limitation is a so-called negative limitation and if so, whether silence in the prior art is sufficient to satisfy a negative limitation. Petitioner, however, does not rely on silence in the prior art because Petitioner has demonstrated that the claimed steps and features would have been obvious in view of Johansson’s express disclosure, and in further view of the teachings and suggestions of Johansson and Boss. Accordingly, we need not decide whether “without pre-registration” should be construed as a negative limitation.

We have reviewed the parties’ arguments and the evidence of record. Upon review, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that claim 12 of the ’667 patent is unpatentable over the combination of Johansson and Boss.

*d. Claims 13–15*

With respect to claim 13, which recites a mobile station comprising circuitry operable to perform steps similar to those recited in claim 12, Petitioner relies on the discussion in the Petition regarding claim 12. Pet. 48–51. For example, with respect to claim 13’s recitation of “circuitry operable to send a request for location finding information from a mobile station as a message through the network to a location message server,” Petitioner relies on discussion in the Petition concerning the step in claim 12 of “sending a request for location finding information from a mobile station

as a message through the network to a location message server.” *Id.* at 49–50. With respect to claim 13’s recitation of “circuitry operable to receive from the location message server, a message containing location finding information based on the cell occupied by at least one mobile station,” Petitioner relies on discussion in the Petition concerning the step in claim 12 of “receiv[ing], from the location message server, a message containing location finding information based on the cell occupied by at least one mobile station.” *Id.* at 50–51. As to claim 13’s recitation of “provision of the location finding information being made without pre-registering the mobile station with the location finding service,” Petitioner relies on discussion in the Petition concerning the recitation in claim 12 that “the method is performed without pre-registering the mobile station for the location finding service.” *Id.* at 51.

Petitioner argues that the mobile station in Johansson, which performs the functions recited in claim 13, necessarily includes circuitry operable to perform the claimed functions. *Id.* at 50–51. For reasons we discussed with respect to claim 12, we are persuaded by Petitioner’s arguments that the combination of Johansson and Boss teaches or suggests a mobile station that performs the functions recited in claim 13. We are persuaded also by Petitioner’s evidence and arguments that “cellular mobile communications system[s]” were “known to necessarily include circuitry operable to perform functions” such as those described in Johansson and Boss. Otherwise, the mobile stations in Johansson and Boss would not have been able to perform the described functions. *Id.* (citing Ex. 1008 ¶ 56). With respect to claim 13, Patent Owner does not raise any arguments in addition to those it raised regarding claim 12.

We have reviewed the parties' arguments and the evidence of record. Upon review, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that the combination of Johansson and Boss renders claim 13 of the '667 patent unpatentable.

Claim 14 depends from claim 13, and further recites that the mobile station includes "a display operable to display the message." Petitioner argues that it would have been obvious to a skilled artisan at the time of the invention for Johansson's mobile station to include a display operable to display the message including the mobile station's geographical location. Pet. 51–52. In support of its argument, Petitioner relies on Boss's disclosure that the "requested location service information is transmitted to the cellular telephone" and "displayed on the cellular telephone." *Id.* at 51 (citing Ex. 1003, 8:13–16). Petitioner argues that one of ordinary skill in the art would have recognized that it would have been obvious to modify mobile station MS in Johansson to display data requested so that "the user would benefit from being able to see displayed data corresponding to its request, e.g., if the user is lost or in need of directions." *Id.* at 52. According to Petitioner, implementing such a modification would have been within the realm of knowledge of one skilled in the art at the time of the alleged invention. *Id.* (citing *KSR Int'l*, 550 U.S. at 417). We are persuaded that it would have been obvious to display the requested data on the mobile station in Johansson. Johansson depicts mobile stations as including displays. Ex. 1003, Fig. 1 (MS1). We determine that a person of ordinary skill would have recognized that the user in Johansson of mobile station MS would benefit from being able to see information received in response to its request being displayed on mobile station MS. With respect to claim 14, Patent

Owner does not raise any arguments in addition to those it raised regarding claim 12.

We have reviewed the parties' arguments and the evidence of record. Upon review, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that the combination of Johansson and Boss renders claim 14 of the '667 patent unpatentable.

Claim 15 depends from claim 14, and further recites that the mobile station includes "circuitry operable to send the received message to another mobile station." Petitioner argues that, even though Johansson does not disclose this feature, it would have been obvious in view of Boss to modify the mobile station in Johansson to include this feature. Pet. 53–54. In particular, Petitioner relies on Boss's disclosure of a cellular telephone sending messages (e.g., sending updates regarding location information) to other cellular telephones. *Id.* (citing Ex. 1004, 4:27–29, 4:58–61). The disclosure in Boss upon which Petitioner relies describes a cellular telephone user setting up her telephone to periodically broadcast the telephone's location information to others, so that others can locate the user's telephone. Ex. 1004, 4:6–64. We find that Boss's disclosure is different from Johansson, which describes a user sending a request for location information about a mobile station but does not provide any teaching or suggestion that a mobile station would periodically broadcast its location information to others without someone sending a request for such information.

Petitioner argues that "one of ordinary skill in the art would have understood that a user of a cellular telephone could send a received message to another cellular telephone using the SMS circuitry," and that a skilled artisan at the time of invention "would have found it obvious to modify the

mobile station in Johansson to include circuitry [that operates as claimed], similar to the circuitry in Boss.” Pet. 53. Petitioner argues further that a skilled artisan would have understood that implementing such a modification would have been common sense, predictable, and within the realm of an artisan of ordinary skill at the time of invention. *Id.* at 54 (citing *KSR Int’l*, 550 U.S. at 417). Petitioner also argues that the motivation to look to Boss to modify Johansson is that both references relate to location finding information services. *Id.*; *see also* Ex. 1008 ¶ 62 (testimony of Dr. Bartone). These arguments by Petitioner, however, do not articulate a reason to forward the messages received by the mobile station in Johansson’s system to another mobile station. Boss does not involve forwarding received messages, but rather teaches broadcasting one’s location periodically, as we discussed above. Petitioner does not explain sufficiently why broadcasting one’s location periodically would have led a skilled artisan to modify a mobile station in Johansson to forward received messages to other mobile stations.

We have reviewed the parties’ arguments and the evidence of record. Upon review, we determine that Petitioner has not demonstrated, by a preponderance of the evidence, that the combination of Johansson and Boss renders claim 15 of the ’667 patent unpatentable.

*D. Asserted Obviousness Based on Johansson, Boss, and Reed*

Petitioner also argues that claim 15 of the ’667 patent would have been obvious over the combination of Johansson, Boss, and Reed. Pet. 58–60. Petitioner does not provide evidence or argument that cures the deficiency, discussed above, of the combination of Johansson and Boss. Petitioner instead introduces Reed to argue that, to the extent Patent Owner

argues that the “send” operability recited in claim 12 (e.g., “to send the received message to another mobile station”) refers to a peer-to-peer operation, Reed describes peer-to-peer send operations. *Id.* at 59. Because Petitioner does not provide evidence or argument that Reed cures the deficiency of the combination of Johansson and Boss, Petitioner has not persuaded us that claim 15 would have been obvious over the combination with Reed.

We have reviewed the parties’ arguments and the evidence of record. Upon review, we determine that Petitioner has not demonstrated, by a preponderance of the evidence, that the combination of Johansson, Boss, and Reed renders claim 15 of the ’667 patent unpatentable.

### III. SUMMARY

For the foregoing reasons, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that claims 12–14 are unpatentable under 35 U.S.C. § 103(a) over Johansson and Boss. We determine further that Petitioner has not demonstrated, by a preponderance of the evidence, that claim 15 is unpatentable under 35 U.S.C. § 103(a) over Johansson and Boss; or that claim 15 is unpatentable under 35 U.S.C. § 103(a) over Johansson, Boss, and Reed.

### IV. ORDER

Accordingly, it is

ORDERED that claims 12–14 of U.S. Patent No. 7,072,667 B2 are held unpatentable;

FURTHER ORDERED that claim 15 has not been shown to be unpatentable; and

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FURTHER ORDERED that, because this Decision is final, a party to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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