

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD.,
SAMSUNG ELECTRONICS AMERICA, INC., and APPLE INC.,
Petitioner,

v.

IXI IP, LLC,
Patent Owner.

Case IPR2015-01446
Patent 7,016,648 B2

Before KRISTINA M. KALAN, ROBERT J. WEINSCHENK, and
JOHN A. HUDALLA, *Administrative Patent Judges*.

HUDALLA, *Administrative Patent Judge*.

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

Samsung Electronics Co., Ltd., Samsung Electronics America, Inc.,
and Apple Inc. (collectively “Petitioner”) filed a Petition (“Pet.”) (Paper 2)
to institute an *inter partes* review of claims 1, 2, 6, 7, 9, 10, 12–16, 21–24,
26–28, and 30 of U.S. Patent No. 7,016,648 B2 (“the ’648 patent”)

(Ex. 1001) pursuant to 35 U.S.C. §§ 311–319. Patent Owner, IXI IP, LLC (“IXI”), filed a Preliminary Response (“Prelim. Resp.”) (Paper 6) to the Petition. Taking into account the arguments presented in IXI’s Preliminary Response, we determined that the information presented in the Petition established that there is a reasonable likelihood that Petitioner would prevail in challenging claims 1, 2, 6, 7, 9, 10, 12–16, 21–24, 26–28, and 30 of the ’648 patent under 35 U.S.C. § 103(a). Pursuant to 35 U.S.C. § 314, we instituted this proceeding on December 30, 2015, as to these claims of the ’648 patent. Paper 8 (“Dec. on Inst.”).

During the course of trial, IXI filed a Patent Owner Response (Paper 14, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 18, “Pet. Reply”). An oral hearing was held on September 15, 2016, and a transcript of the hearing is included in the record. Paper 26 (“Tr.”).

Petitioner proffered a Declaration of Dr. Sayfe Kiaei (Ex. 1014) with its Petition, and IXI proffered a Declaration of Dr. Narayan Mandayam (Ex. 2501) with its Response. The parties also filed transcripts of the depositions of Dr. Kiaei (Exs. 2502–2504) and Dr. Mandayam (Ex. 1023).

IXI filed a Motion to Exclude (Paper 21) certain exhibits submitted by Petitioner. Petitioner filed an Opposition (Paper 24) and IXI filed a Reply (Paper 25).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1, 2, 6, 7, 9, 10, 12–16, 21–24, 26–28, and 30 of the ’648 patent. For the reasons discussed below, Petitioner has demonstrated by a preponderance of the evidence that these claims are unpatentable under § 103(a).

I. BACKGROUND

A. *Related Proceedings*

The parties identify the following proceedings related to the '648 patent: *IXI Mobile (R&D) Ltd. v. Samsung Electronics Co.*, Case No. 3:15-cv-03752-HSG (N.D. Cal.); *IXI Mobile (R&D) Ltd. v. Apple, Inc.*, Case No. 4:15-cv-03755-PJH (N.D. Cal.); and *IXI Mobile (R&D) Ltd. v. Blackberry Ltd.*, Case No. 3:15-cv-03754-RS (N.D. Cal.). Pet. 1–2; Paper 5, 1–2; Paper 7, 1–2. Petitioner also indicates that the '648 patent is the subject of a petition for *inter partes* review in IPR2015-01445. Pet. 1.

B. *The '648 Patent*

The '648 patent is titled “[m]ethod, system and computer readable medium for downloading a software component to a device in a short distance wireless network” and is directed to a system that allows downloading of a software component to a short distance wireless network in response to device information. Ex. 1001, at [54], Abstract. Figure 1a of the '648 patent is reproduced below:

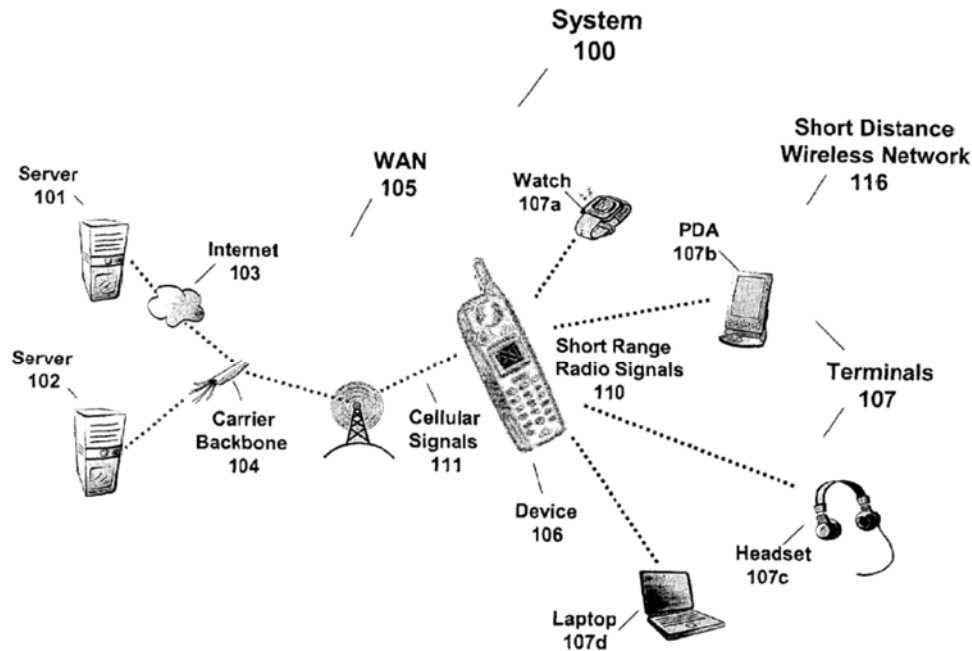


Fig. 1a

As shown above, Figure 1a illustrates system 100 having short distance wireless network 116 connected to Wide Area Network (“WAN”) 105 that includes a cellular network. *Id.* at 3:37–51. The short distance wireless network 116 includes cellular telephone 106 and other terminals 107, including watch 107a, Personal Digital Assistant (PDA) 107b, headset 107c, and laptop computer 107d. *Id.* at 4:47–59. The ’648 patent discloses that a software component is provided to device 106 and/or terminals 107 in response to information obtained from short distance wireless network 116. *Id.* at 3:52–54.

The ’648 patent issued from an application filed on November 18, 2002, as a continuation-in-part of an application filed on December 18, 2001. *Id.* at [22], [63]. Neither party addresses whether the challenged claims are entitled to priority as of December 18, 2001, under 35 U.S.C. § 120. As discussed below, Petitioner establishes, at a minimum, that its

asserted references qualify as prior art relative to the December 18, 2001, filing date of the earlier application.

C. Illustrative Claim

Claims 1, 14, 15, and 30 of the '648 patent are independent. Claims 2, 6, 7, 9, 10, 12, and 13 depend from claim 1, and claims 16, 21–24, and 26–28 depend from claim 15. Independent claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method, comprising:
 - obtaining device information from a device in a short distance wireless network,
 - wherein the device information includes a manufacturer of the device and a type of the device,
 - wherein the obtaining includes:
 - generating a short-range radio signal, including the device information, from the device to a cellular device, and
 - generating a cellular signal, including the device information, from the cellular device to a processing device in a wide area network; and
 - downloading a software component to the device from the processing device in response to the device information.

Ex. 1001, 15:31–45.

D. The Prior Art

Petitioner relies on the following prior art:

PCT Publication No. WO 01/76154 A2 to Marchand, published Oct. 11, 2001 (Ex. 1007, “Marchand”);

U.S. Patent Publication No. 2002/0069263 A1 to Sears et al., filed June 6, 2002 (Ex. 1015, “Sears”); and

PCT Publication No. WO 01/41477 A1 to Lee, published June 7, 2001 (Ex. 1016, “Lee”).

E. The Asserted Grounds

We instituted this proceeding on the following grounds of unpatentability (Dec. on Inst. 15):

References	Basis	Claims Challenged
Marchand and Sears	35 U.S.C. § 103(a)	1, 2, 6, 7, 10, 12–16, 21, 22, 24, 26–28, and 30
Marchand, Sears, and Lee	35 U.S.C. § 103(a)	9 and 23

F. Claim Interpretation

Petitioner argues that the claim terms should be given their “broadest reasonable plain meaning.” Pet. 4 (citing 37 C.F.R. § 41.100(b)). IXI counters that the terms should be interpreted according to their plain and ordinary meaning. PO Resp. 6.

In an *inter partes* review, we construe claims by applying the broadest reasonable interpretation in light of the specification. 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under the broadest reasonable interpretation standard, and absent any special definitions, claim terms are 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 definitions for claim terms or phrases must be set forth “with reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Only those

terms which are in controversy need be construed, and 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). We apply the broadest reasonable interpretation standard to the claims of the '648 patent.

The parties do not seek construction of any claim terms. In our Decision on Institution, we determined that no claim terms required explicit construction. Dec. on Inst. 6. Based on our review of the complete record, we maintain our determination that no explicit constructions are necessary.

II. ANALYSIS

A. *Obviousness Ground Based on Marchand and Sears*

Petitioner contends claims 1, 2, 6, 7, 10, 12–16, 21, 22, 24, 26–28, and 30 would have been obvious over the combination of Marchand and Sears. Pet. 8–54. IXI disputes Petitioner's contention. PO Resp. 11–40.

1. *Principles of Law*

A claim is unpatentable under 35 U.S.C. § 103(a)¹ 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

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. §§ 102 and 103. Because the '648 patent has an effective filing date before the effective date of the applicable AIA amendments, throughout this Decision we refer to the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

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) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *Paulsen*, 30 F.3d at 1480 (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). We analyze Petitioner’s obviousness grounds with the principles identified above in mind.

2. *Level of Ordinary Skill in the Art*

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). In addition, the prior art of record in this proceeding—namely, Marchand, Sears, and Lee—is indicative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579; *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

According to Petitioner, a person of ordinary skill in the art relevant to the ’648 patent would have had a Master of Science Degree in electrical engineering, computer engineering, or computer science or a bachelor’s degree in electrical engineering, computer engineering, or computer science and two or more years of experience in communication and networking

systems. Pet. 7. Petitioner’s contention is supported by the testimony of Dr. Kiaei, who bases his testimony on his “experience working in industry and academia, with undergraduate and postgraduate students, with colleagues from academia, and with engineers practicing in industry.” Ex. 1014 ¶¶ 15–16. IXI does not dispute Petitioner’s definition of the level of ordinary skill in the art, and, in fact, IXI applies it in IXI’s Patent Owner Response. PO Resp. 8; *see also* Ex. 2501 ¶ 16 (IXI’s declarant, Dr. Mandayam, applying same definition). Accordingly, we apply Petitioner’s definition of the level of ordinary skill in the art for purposes of this Decision. We further observe that Petitioner’s proposed definition comports with the qualifications a person would need to understand and implement the teachings of the ’648 patent and the prior art of record.

3. *Marchand*

Marchand is a published international patent application, and Petitioner contends it qualifies as prior art under 35 U.S.C. § 102(a). *See* Pet. 3. IXI does not contest Petitioner’s contention. For purposes of this decision, we find Marchand qualifies as prior art to the ’648 patent under 35 U.S.C. § 102(a) because Marchand’s October 11, 2001, publication date was before the December 18, 2001, filing date of the application to which the ’648 patent claims priority. Ex. 1001, at [63]; Ex. 1007, at [43].

Marchand relates to “an ad-hoc network and a gateway that provides an interface between external wireless IP [Internet Protocol] networks and devices in the ad-hoc network.” Ex. 1007, 1:5–7. Figure 3 of Marchand is reproduced below:

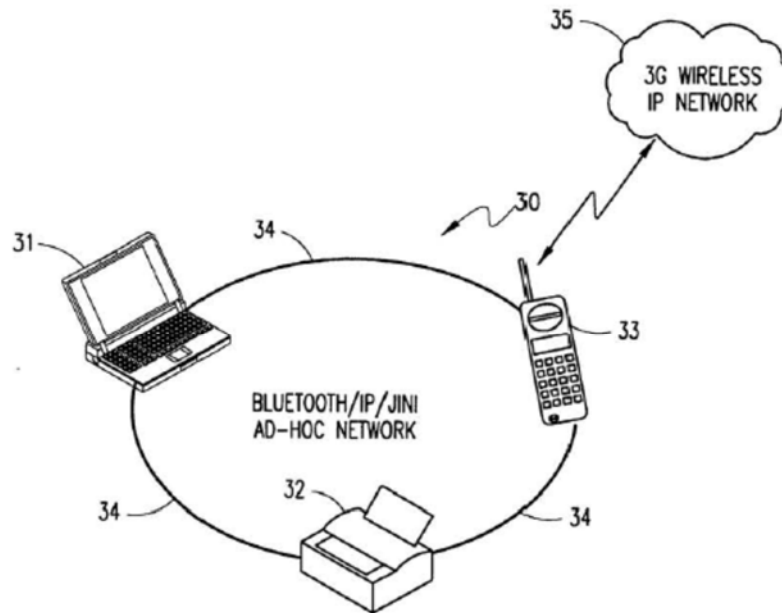


FIG. 3

Figure 3 illustrates “an ad-hoc network 30 utilizing Bluetooth, IP [Internet Protocol], and JINI technologies . . . to enable the use of a gateway mobile phone.” *Id.* at 7:7–9. Ad-hoc network 30 (also called “Bluetooth Piconet (30)”) includes laptop computer 31, printer 32, and mobile phone 33, which can communicate via Bluetooth radio link 34. *Id.* at Abstract, 7:9–11.

Mobile phone 33 acts “as a gateway between the ad-hoc network and a 3G wireless IP network 35 such as the General Packet Radio Service (GPRS) network.” *Id.* at 7:12–14. Regarding IP address translation, IP packets from the GPRS are received at mobile phone 33 through its public IP address, and then are forwarded to the private IP address of the device on ad-hoc network 30. *Id.* at 7:14–16. Address translation in the opposite direction is handled similarly. *Id.* at 7:16–17.

“JINI (Java) technology is utilized to publish and share services between the devices” in network 30, and this technology “provid[es] the capability for an application 21 to discover, join, and download services 22 from a JINI LUS [Lookup Service].” *Id.* at 6:3–4, 6:21–22. “The LUS

contains a list of available services provided by other devices on the network.” *Id.* at 3:11–12. Devices in the network “announce not only value-added services, but also their attributes and capabilities to the network,” whereupon these services are published through the LUS. *Id.* at 3:12–15, 10:17–18. The LUS also provides interfaces for the available services to the devices in the network. *Id.* at 3:12–13; 8:12–15.

4. *Sears*

Sears is a U.S. Patent Application Publication, and Petitioner contends it qualifies as prior art under 35 U.S.C. § 102(e). *See* Pet. 3. IXI does not contest Petitioner’s contention. For purposes of this decision, we find *Sears* qualifies as prior art to the ’648 patent under 35 U.S.C. § 102(e) because *Sears*’s September 28, 2001, filing date was before the December 18, 2001, filing date of the application to which the ’648 patent claims priority. Ex. 1001, at [63]; Ex. 1015, at [22].

Sears is titled “Wireless Java Technology” and is directed to a system for providing optimized interaction between users, devices, and applications, such as Java-like applications, located in a network environment. Ex. 1015, at [54], Abstract. According to *Sears*, users of conventional mobile devices are not able to download and save all the applications they desire due to memory and power constraints. *Id.* ¶¶ 9, 10. The invention described in *Sears* purports to allow device users to request applications and content, which are provided to them based on metrics and characteristics specific to the users and/or their devices. *Id.* ¶ 12. In particular, *Sears* describes a server that may be used as a central point of focus for users of mobile devices, carriers, network operators, content providers, application developers, and device manufacturers. *Id.* Mobile device characteristics and

capabilities may be stored in a database “accessible to information and content providers so as to provide and qualify content based on look up to the device characteristics and capabilities, for example, by device manufacturer name, device model number, or uniquely assigned I.D. numbers.” *Id.*

5. *Claim 1*

a. *Comparison of Marchand and Sears to Claim 1*

Petitioner cites Marchand’s Bluetooth piconet for the recited “short distance wireless network” of claim 1. Pet. 22–24 (citing Ex. 1007, 1:26–2:26, 4:7–9, 6:23–27, Fig. 3). Petitioner maps any non-cellular device in the piconet, such as a laptop or a PDA, to the recited “device in a short distance wireless network.” *Id.* at 23–24 (citing Ex. 1007, 1:26–2:26, 3:22–30, 6:23–27, 7:7–25, Fig. 3; Ex. 1014 ¶¶ 42–43). Regarding “generating a short-range radio signal,” Petitioner cites Marchand’s description of “Bluetooth radio link 34” and testimony from Dr. Kiaei indicating that this link is used to send information in Marchand’s piconet. *Id.* at 29 (citing Ex. 1007, 3:22–30, 7:7–11; Ex. 1014 ¶ 51). For “generating a cellular signal,” Petitioner asserts that Marchand’s gateway mobile phone 33 is connected to a cellular network through which devices send information via cellular signals. *Id.* at 29–30 (citing Ex. 1007, 6:23–27, 7:12–23; Ex. 1014 ¶ 55).

Petitioner contends Marchand’s gateway mobile phone 33 “obtains device information” from the other devices based on Marchand’s description that devices employing JINI technology “announce . . . their attributes and capabilities to the network.” *Id.* at 24 (quoting Ex. 1007, 3:4–16; citing Ex. 1014 ¶ 44) (emphasis omitted). Petitioner also cites Marchand’s example of passing “terminal class and terminal configuration (bearer capability and the

application capability of the IP device)” to a Home Subscriber Server. *Id.* at 24–25 (quoting Ex. 1007, 12:30–13:7) (emphasis omitted).

Regarding “device information” such as “a manufacturer of the device and a type of the device,” Petitioner cites Sears. Pet. 25–26. According to Petitioner, Sears describes an embodiment where “users may request applications and content and may be provided them based on . . . characteristics specific to . . . their devices.” *Id.* at 25 (quoting Ex. 1015 ¶ 12). Sears also describes “a database of mobile device characteristics and capabilities . . . [that is] accessible to information and content providers so as to provide and qualify content based on look up to the device characteristics and capabilities, for example, by device manufacturer name, device model number, or uniquely assigned I.D. numbers” Ex. 1015 ¶ 12.

Petitioner posits combining Sears’s teachings on device information with the piconet described in Marchand. Pet. 29–34. Specifically, Petitioner contends the combination teaches that device information in accordance with Sears from a device on Marchand’s piconet 30 may be sent via radio signal to a cellular device, namely, Marchand’s gateway mobile phone 33. *Id.* at 29–30 (citing Ex. 1014 ¶¶ 52–53). In a similar manner, Petitioner contends Marchand’s gateway mobile phone 33 can “generate[] a cellular signal that includes the device information.” *Id.* at 31 (citing Ex. 1014 ¶ 56). Petitioner further notes Sears describes cellular device 140 transmitting device information over a cellular network to server 101. *Id.* (citing Ex. 1014 ¶ 57; Ex. 1015 ¶¶ 12, 34–35, 41). Regarding the recited “processing device in a wide area network,” Petitioner cites Sears’s server 101. *Id.* at 31–34 (citing Ex. 1014 ¶¶ Ex. 1015 ¶¶ 12–14, 37, 41, 46).

For the “downloading a software component” limitation, Petitioner contends “Marchand describes downloading software to devices in the

Piconet through a mobile phone.” *Id.* at 34 (citing Ex. 1007, 13:12–31). Although Petitioner acknowledges Marchand does not teach downloading “in response to device information,” Petitioner cites Sears as teaching this limitation. *Id.* at 35–36 (citing Ex. 1014 ¶¶ 61–63; Ex. 1015 ¶¶ 7–8, 12–13, 30–32, 34–42). In particular, Petitioner contends Sears’s server “allows applications to be customized and provided to devices in a network based on ‘characteristics specific to the users and/or their devices.’” *Id.* at 35 (quoting Ex. 1015 ¶¶ 12–13).

IXI argues that neither Marchand nor Sears “teaches . . . the sending or downloading of an application in response to device information.” PO Resp. 29. Specifically, IXI contends Sears’s “‘downloading’ of a software component is a separate and distinct transaction from the transmission of the alleged device information.” *Id.* at 31 (citing Ex. 2501 ¶ 50). IXI explains that, in Sears, device information is transmitted to the network and stored in a database; then, “at a later time and in a separate transmission,” a user can request software based on the device information. *Id.* In contrast, IXI contends the ’648 patent requires downloading to be done “automatically and contemporaneously.” *Id.* at 32.

Taking into account IXI’s arguments and assuming, *arguendo*, that the “in response to” language of claim 1 requires automatic and contemporaneous downloading,² as IXI contends, Petitioner has established that Sears teaches accessing device capabilities and “tailor[ing] individual applications 110 *in real-time* to the unique capabilities of particular devices 140 in network 100.” Pet. 36 (quoting Ex. 1015 ¶ 41) (emphasis added).

² We need not reach this issue to resolve the question of obviousness. See *Vivid Techs.*, 200 F.3d at 803.

Petitioner also cites Sears’s description that device information can be “provided by a device or user *during a request* for . . . application download.” Pet. 36 (quoting Ex. 1015 ¶ 41) (emphasis added). Petitioner additionally cites Sears’s description of software that is downloaded “based on a user profile *sent at the time of search*.” Pet. Reply 7 (quoting Ex. 1015 ¶ 42). Contrary to IXI’s arguments, these citations establish that Sears is not limited to providing device information in one transaction and then downloading software in a separate transaction. Rather, we are persuaded by Petitioner’s analysis that an ordinarily skilled artisan would have understood Sears as also teaching contemporaneous downloading and sending of device information. *See* Ex. 1014 ¶¶ 62–63. Thus, Petitioner establishes that the combination of Marchand and Sears teaches every limitation of claim 1.

b. Rationale for Combining Marchand and Sears

Petitioner posits adding “Sears’ repository server 101 and database 120, as well as the corresponding device information and user preferences needed to index and optimize applications downloaded therefrom” to Marchand’s system. Pet. 36 (citing Ex. 1014 ¶ 64). Petitioner contends an ordinarily skilled artisan “would have been motivated to use Sears’ techniques for optimized downloading of applications in systems with similar devices and arrangements, such as the Marchand system.” *Id.* at 15 (citing Ex. 1014 ¶¶ 31–34). Petitioner notes the systems of Marchand and Sears utilize common components, such as mobile telephones and PDAs, and that both references describe devices communicating with a server through a gateway. *Id.* (citing Ex. 1007, 3:24–26, 7:7–17; Ex. 1015 ¶¶ 34–

35). In light of these similarities, Petitioner contends an ordinarily skilled artisan

would have seen the Sears download techniques as applicable to the Marchand system and would have been motivated to include the Sears download techniques in the Marchand system to achieve the purported benefits of Sears, such as “seamless and optimized interaction between users, devices, and applications” and “customization to optimize the applications for use by registered devices.”

Id. (quoting Ex. 1015 ¶¶ 34, 59; citing Ex. 1014 ¶ 34).

Petitioner further contends an ordinarily skilled artisan “would have been motivated to extend Sears’ download functionality to all devices in the Marchand system to achieve the customized and optimized download of software that is present in Sears,” particularly for the benefit of Marchand’s piconet devices that do not have cellular connectivity on their own. *Id.* at 17 (citing Ex. 1014 ¶ 37). Petitioner contends this combination would have been natural to an ordinarily skilled artisan in light of “the common disclosure in Marchand and Sears related to Bluetooth, IP, Java technology, and communications between a server and a device through a gateway.” *Id.* at 18 (citing Ex. 1014 ¶ 38).

IXI argues “Marchand and Sears do not have common disclosures.” PO Resp. 27 (citing Ex. 2501 ¶ 51). Specifically, IXI contends “Marchand is directed at devices exclusively on an ad-hoc Bluetooth piconet network.” *Id.* (citing Ex. 1007, Abstract; Ex. 2501 ¶ 52). IXI’s contention belies Marchand’s express teachings on the mobile phone acting as a gateway to a “3G wireless IP network . . . such as [a] General Packet Radio Service (GPRS) network.” Pet. 11 (quoting Ex. 1007, 7:12–14). Indeed, Petitioner cites Marchand’s and Sears’s common teachings on IP networks as a reason to combine the references. *See id.* at 18–19 (citing Ex. 1014 ¶ 38).

Similarly, IXI contends Sears “does not disclose a Bluetooth network.” PO Resp. 28 (citing Ex. 2501 ¶ 53). As noted by Petitioner (Pet. 18, 25–26; Pet. Reply 12), however, Sears expressly references Bluetooth and teaches that “unique device identifier and unique manufacturer identifiers” from the Bluetooth standard can be used to index Sears’s database. Ex. 1015 ¶ 41. Thus, contrary to IXI’s contention, Marchand’s and Sears’s common teachings related to Bluetooth support Petitioner’s combination. See Ex. 1014 ¶ 38. We additionally are persuaded by Petitioner’s showing that the combination is supported by the references’ common teachings on JINI Java technology. See Pet. 18–19 (citing Ex. 1007, 7:7–25, Fig. 3; Ex. 1014 ¶ 38; Ex. 1015 ¶¶ 8, 35, 38, 41); Pet. Reply 13 (citing Ex. 1007, 2:27–3:16; Ex. 1015 ¶ 38).

IXI also characterizes Petitioner’s alleged motivation to combine Marchand and Sears as being a “hindsight-fueled, juxtaposition of discrete elements of the references.” PO Resp. 27. IXI argues that Petitioner’s alleged motivation “is based entirely on maintaining the benefits (or not ‘negating the benefits of’[]) of each individual system after making the alleged combination.” PO Resp. 26 (citing Pet. 15–16). We do not find Petitioner’s alleged motivation to be flawed, however. Supported by the testimony of Dr. Kiaei, Petitioner provides an extensive analysis that turns on an ordinarily skilled artisan being motivated to add “Sears’ techniques for optimized downloading of applications” to Marchand. See Pet. 15 (citing Ex. 1014 ¶¶ 31–34). Petitioner’s mention of “retain[ing] the benefits” of Marchand simply underscores that Sears’s server and optimized application downloading functionality augment and provide further benefits to Marchand’s piconet and its use of a gateway mobile phone to connect to a cellular IP network. *Id.* at 17–18 (citing Ex. 1014 ¶ 37). Petitioner’s

combination also is rooted in the common teachings mentioned above. Thus, Petitioner establishes that an ordinarily skilled artisan would have recognized that Sears's technique would also improve similar devices in the same way; as such, using Sears's technique in this way "is obvious unless its actual application is beyond his or her skill." *KSR*, 550 U.S. at 417. The relatively high level of skill ascribed to an ordinary artisan—namely, a Master of Science degree in engineering (*see supra* § II.A.2.)—suggests that applying Sears's techniques to Marchand would have been well within the skill of an ordinarily skilled artisan. For these reasons, Petitioner has established that a person of ordinary skill in the art would have had reason to combine the teachings of Marchand and Sears to achieve the method recited in claim 1.

c. Secondary Considerations of Nonobviousness

IXI did not put forth any evidence of secondary considerations of nonobviousness.

d. Conclusion Regarding Claim 1

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that the subject matter of claim 1 would have been obvious over the combination of Marchand and Sears under 35 U.S.C. § 103(a).

6. Claims 14, 15, and 30

Claims 14, 15, and 30 are independent claims that are similar in scope to claim 1. *See* Ex. 1001, 16:10–38, 18:1–19. Petitioner's obviousness analysis for claims 14, 15, and 30 mostly tracks its analysis for claim 1. *See*

Pet. 43–50, 52–54. We have reviewed Petitioner’s analysis, and, for reasons similar to those mentioned above, Petitioner presents sufficient evidence to support a finding that Marchand and Sears teach the claimed subject matter recited in claims 14, 15, and 30. As stated above, we also are persuaded by Petitioner’s rationale for the combination of Marchand and Sears. *See* Pet. 15–21, 36–37; Ex. 1014 ¶¶ 34–40. With respect to claims 14, 15, and 30, IXI relies on the same arguments it made for claim 1, which we have addressed above. *See* PO Resp. 35–37, 39–40. Accordingly, based on the entire trial record, we conclude Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claims 14, 15, and 30 would have been obvious over the combination of Marchand and Sears.

7. *Dependent Claims*

Claim 2 depends from claim 1 and recites “the software component is downloaded in response to a user preference of a type of the software component.” Ex. 1001, 15:47–49. Petitioner cites Sears for teaching that “users may request applications and content and may be provided them based on the metrics and characteristics specific to the users and/or their devices.” Pet. 39 (quoting Ex. 1015 ¶ 12). Claim 16 is similar to claim 2, and Petitioner relies on a similar analysis. *See id.* at 51. Petitioner additionally cites Sears’s preferences stored in a user profile in database 120 for teaching claim 16’s recitation that “the database includes a user preference of a type of the first software component.” *Id.* (citing Ex. 1015 ¶¶ 38, 39, 42, Fig. 1).

Claims 6, 7, 10, and 12 all further limit the “device” recited in claim 1. For claim 6’s recitation that the “the device is a Bluetooth™ device communicating with a cellular device,” Petitioner cites the non-cellular

devices in Marchand's Bluetooth piconet, such as the laptop or PDA, which communicate with the gateway mobile phone. Pet. 40–41 (citing Ex. 1007, 3:24–26, 7:7–25). Claim 21 contains a similar limitation, and Petitioner relies on the same analysis. *See id.* at 51.

For claim 7, which recites “the device is a messaging terminal,” Petitioner cites Marchand's teaching that the PDA can send and receive email. *Id.* at 41 (citing Ex. 1007, 3:24–26, 7:7–25, 10:2–23). Claim 22 contains a similar limitation, and Petitioner relies on the same analysis. *See id.* at 51.

Regarding claim 10, which recites “the device includes a short-range radio processor and a 2.4 GHZ transceiver,” Petitioner cites Marchand's description of Bluetooth being implemented with a radio chipset that operates in the 2.4 gigahertz band. *Id.* at 41–42 (citing Ex. 1007, 1:27–31, 2:7–16, 6:10–25, 7:7–25; Ex. 1014 ¶ 71). Claim 24 contains a similar limitation, and Petitioner relies on the same analysis. *See id.* at 52.

Claim 12 recites a group from which the recited “device” is selected. Ex. 1001, 16:3–7. Petitioner cites the same teachings from above on a laptop and PDA, which are constituents of the group. Pet. 42 (citing Ex. 1007, 3:24–26, 7:7–25). Claim 26 recites the same group, and Petitioner relies on the same analysis. *See id.* at 52.

Claim 13 also depends from claim 1 and recites “the short distance wireless network is a Bluetooth™ network.” Ex. 1001, 16:8–9. Petitioner cites Marchand's description of an ad-hoc Bluetooth piconet for teaching this limitation. Pet. 42 (citing Ex. 1007, 1:26–2:16, 2:17–26, 3:22–30, 6:23–27, 7:7–25).

Claim 27 and 28 depend from claim 15 and recite, respectively, “a short distance wireless network” and “a wide area network including a

cellular network.” Ex. 1001, 17:6–9. Similar to claim 1, Petitioner relies on Marchand’s Bluetooth piconet and cellular network, respectively, for teaching these limitations. Pet. 52.

Therefore, having considered Petitioner’s unpatentability contentions and supporting evidence, we are persuaded that Petitioner presents sufficient evidence to support a finding that Marchand and Sears teach the claimed subject matter recited in claims 2, 6, 7, 10, 12, 13, 16, 21, 22, 24, and 26–28. For the same reasons as above with respect to claim 1, we also are satisfied that Petitioner has presented sufficient reasons for the combination of Marchand and Sears, as supported by Dr. Kiaei’s testimony. See Pet. 15–21, 36–37; Ex. 1014 ¶¶ 34–40. Furthermore, regarding claims 2, 6, 7, 10, 12, 13, 16, 21, 24, and 26–28, IXI relies on its arguments for claim 1 (see PO Resp. 33–35, 37–39), which we have analyzed and discussed above. IXI presents no arguments regarding claim 22. Therefore, based on the entire record before us, we conclude Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claims 2, 6, 7, 10, 12, 13, 16, 21, 22, 24, and 26–28 would have been obvious over the combination of Marchand and Sears.

B. Obviousness Ground Based on Marchand, Sears, and Lee

Petitioner contends claims 9 and 23 would have been obvious over the combination of Marchand, Sears, and Lee. Pet. 54–56. IXI disputes Petitioner’s contention. PO Resp. 40–44.

1. Lee

Lee is a published international patent application, and Petitioner asserts it qualifies as prior art under 35 U.S.C. § 102(a). See Pet. 4. IXI

does not contest Petitioner's contention. For purposes of this decision, we find Lee qualifies as prior art to the '648 patent under 35 U.S.C. § 102(a) because Lee's June 7, 2001, publication date was before the December 18, 2001, filing date of the application to which the '648 patent claims priority. Ex. 1001, at [63]; Ex. 1016, at [43].

Lee is titled "Instant messenger system and instant message transfer method using phone number as instant messenger address." Ex. 1016, at [54]. Lee is directed to an instant messenger system and a method for transmitting an instant message that can use cable and radio telephone numbers as an instant messenger address to access an instant messenger service. *Id.* at Abstract. Figure 1 of Lee is reproduced below:

FIG. 1

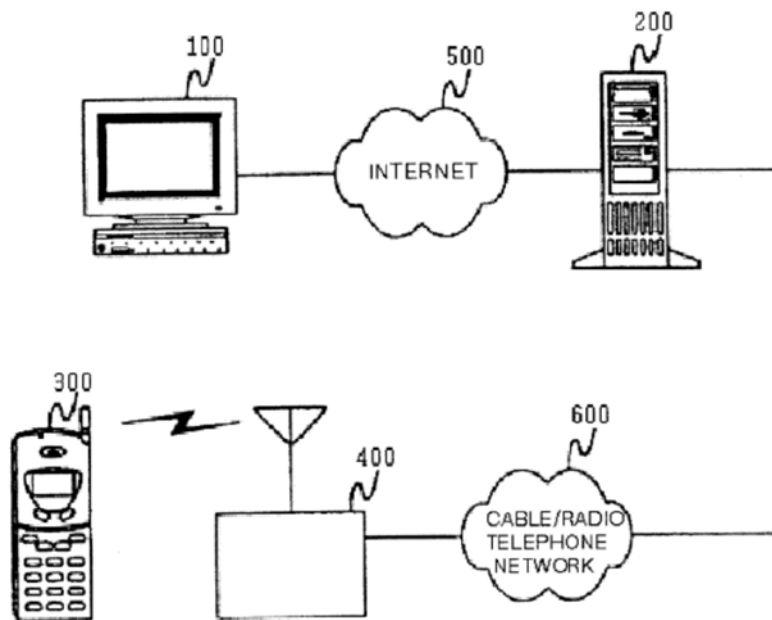


Figure 1 of Lee illustrates instant messenger system 200, user terminal 100, cellular phone 300, base station 400, Internet 500, and telephone network 600, including a mobile telephone network and a cable telephone network. *Id.* at 9:12–20. Lee describes that instant messenger system 200 can

transmit data to cellular phone 300 through a mobile telephone network after passing through a cable telephone network. *Id.* at 10:19–22. Lee’s “user terminal 100 downloads an instant messenger program (not shown) from the instant messenger system 200, and puts the instant messenger program linked with the instant messenger system 200 into execution.” *Id.* at 10:7–11. The instant messenger system enables a message transmitting party to transmit an instant message to a message receiving party. *Id.* at 4:3–5. Furthermore, Lee describes that “[a]n instant messenger service can permit users on-line to instantly exchange messages with one another, and is to supplement a drawback of an electronic mail (E-mail) service that requires much time in transmitting and confirming messages.” *Id.* at 1:14–18.

2. *Claims 9 and 23*

Claim 9 depends from claim 7 and recites “the software component is an instant messaging terminal software component.” Ex. 1001, 15:60–61. Claim 23 recites a similar limitation. *See id.* at 16:61–63. Petitioner acknowledges Marchand and Sears do not explicitly describe that the applications available for download include an instant messaging terminal software component. Pet. 54. Nonetheless, Petitioner cites Lee’s description of a user terminal downloading “an instant messenger program.” *Id.* (quoting Ex. 1016, 10:7–11) (emphasis omitted). Petitioner argues it would have been obvious to a person of ordinary skill in the art to include this software component in the applications available for download in the combination of Marchand and Sears. *Id.* (citing Ex. 1014 ¶ 84). Specifically, Dr. Kiaei states an ordinarily skilled artisan would have been motivated to include the instant messenger program of Lee in the applications made available by Sears’s server 101 to achieve the benefits of

instantly exchanging messages, as described in Lee. Ex. 1014 ¶¶ 84, 86 (citing Ex. 1016, 1:14–18).

Moreover, Petitioner notes that Lee’s user terminal can support the wireless application protocol (WAP), and that Sears describes the benefits of Java technology over WAP. Pet. 55 (citing Ex. 1015 ¶¶ 37, 42; Ex. 1016, 10:13–18). Petitioner also contends Sears’s discussion of the benefits of Java technology over WAP provides motivation to convert WAP programs to Java applications, as described in Sears. *Id.* at 55–56 (citing Ex. 1015 ¶¶ 4–8, 30). Accordingly, Petitioner contends an ordinarily skilled artisan “would have seen Lee’s instant messenger program as applicable to the Sears server 101 and would have been motivated to include Lee’s instant messenger program in the Sears server 101 as the WAP version described by Lee and Sears or a Java version described by Sears.” *Id.* at 56 (citing Ex. 1014 ¶ 87). As such, Petitioner presents sufficient evidence to support a finding that the combination of Marchand, Sears, and Lee teaches the claimed subject matter recited in claims 9 and 23.

IXI disputes Petitioner’s reasons to combine Lee with Marchand and Sears “because neither Marchand nor Sears discuss the need for an instant messaging service.” PO Resp. 42–43 (citing Ex. 2501 ¶ 59). IXI therefore contends Petitioner’s combination relies on “pure hindsight analysis.” *Id.* at 42. IXI also cites Dr. Mandayam’s testimony and argues that Lee does not teach the implementation of its instant massager program in a Java application, such as those utilized in the network of Sears. *Id.* at 44 (citing Ex. 2501 ¶ 61). Nevertheless, Petitioner’s “analysis need not seek out precise teachings [in Marchand and Sears] directed to the specific subject matter of the challenged claim,” because we “can take account of the inferences and creative steps that a person of ordinary skill in the art would

employ.” *KSR*, 550 U.S. at 418. In this case, Petitioner and its expert highlight the common user terminals in Marchand, Sears, and Lee, and the common teachings in Sears and Lee regarding WAP, to support the contention that an ordinarily skilled artisan would have been motivated to implement a WAP or Java version of Lee’s instant messenger on Sears’s server. *See* Pet. 55–56 (citing, *inter alia*, Ex. 1014 ¶ 87). Based on Petitioner’s showing, we conclude that implementing Lee’s instant messaging application in the combination of Marchand and Sears would have amounted to “[t]he combination of familiar elements according to known methods” from which an ordinarily skilled artisan would have expected “predictable results.” *KSR*, 550 U.S. at 416.

IXI further contends that Dr. Kiaei engages in “pure speculation” in his purported contention that “Lee’s instant messaging service *could* be utilized by the device in Marchand.” PO Resp. 43 (citing Ex. 1014 ¶ 87). IXI argues that, when considering the master/slave relationships in Marchand’s Bluetooth piconet, Lee’s instant messaging application would be “mostly useless” in Marchand’s piconet “because the slave devices would not be able to communicate with each other.” *Id.* (citing Ex. 2501 ¶ 60). Yet Marchand already describes a user terminal sending and receiving email through a gateway mobile phone (*see* Pet. 41 (citing Ex. 1007, 10:2–23)), and, as noted by Petitioner, Lee describes the benefits of instant messaging in comparison to email. *See id.* at 55 (citing Ex. 1014 ¶ 86; Ex. 1016, 1:14–18). Accordingly, we are satisfied by Petitioner’s rationale, as supported by Dr. Kiaei’s testimony, that an ordinarily skilled artisan would have been motivated to add instant messaging functionality “to supplement a drawback of an electronic mail (E-mail) service that requires much time in transmitting and confirming messages.” Pet. 55 (quoting Ex. 1016, 1:14–18). Nor are

we persuaded by IXI's argument about slave devices' inability to communicate with one another via instant messenger; such an argument overlooks, at least, the possibility of utilizing instant messaging with devices outside of Marchand's piconet. *See* Pet. Reply 18. For these reasons, we are satisfied that Petitioner has presented sufficient rationale for the combination of Marchand, Sears, and Lee, as supported by Dr. Kiaei's testimony. *See* Pet. 55–56; Ex. 1014 ¶¶ 84–87.

Therefore, having reviewed the entire trial record, we conclude Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claims 9 and 23 would have been obvious over the combination of Marchand, Sears, and Lee.

C. Motion to Exclude

IXI moves to exclude Exhibits 1024, 1025, 1026, and 1027 on the basis of relevance and based on IXI's contention that these exhibits constitute improper supplemental information that was submitted without authorization pursuant to 37 C.F.R. § 42.123. Paper 21, 2–5, 8–11. IXI also moves to exclude Exhibit 1026 on the basis of authenticity and hearsay. *Id.* at 5–8. Because we do not rely upon Exhibits 1024, 1025, 1026, and 1027 in rendering this Decision, we dismiss as moot IXI's motion to exclude these exhibits.

IXI moves to exclude Exhibit 1017 on the basis of relevance “because it is not referenced or explained at all in the Petition or the Reply.” Paper 21, 11–12. In its Opposition, Petitioner IXI contends Dr. Kiaei referenced

this exhibit in his declaration. Paper 24, 2 (citing Ex. 1014³ ¶ 55). Because Dr. Kiaei relies on this exhibit in support of his testimony in this case, IXI has not shown that it is irrelevant under FRE 401 and 402. Accordingly, we deny IXI's motion to exclude Exhibit 1017.

III. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that

- (a) claims 1, 2, 6, 7, 10, 12–16, 21, 22, 24, 26–28, and 30 are unpatentable over Marchand and Sears under 35 U.S.C. § 103(a); and
- (b) claims 9 and 23 are unpatentable over Marchand, Sears, and Lee under 35 U.S.C. § 103(a).

IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1, 2, 6, 7, 9, 10, 12–16, 21–24, 26–28, and 30 of the '648 patent are held unpatentable;

FURTHER ORDERED that IXI's motion to exclude Exhibits 1024, 1025, 1026 and 1027 is *dismissed as moot*;

FURTHER ORDERED that IXI's motion to exclude Exhibit 1017 is *denied*; and

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

³ Petitioner references Ex. 1003, but the context makes clear that Petitioner intended to reference Ex. 1014.

IPR2015-01446
Patent 7,016,648 B2

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