

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD.,
Petitioner,

v.

HEADWATER RESEARCH LLC,
Patent Owner.

IPR2024-01337
Patent 8,588,110 B2

Before HYUN J. JUNG, SCOTT B. HOWARD, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Samsung Electronics Co. Ltd. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of an *inter partes* review of claims 1–30 of U.S. Patent No. 8,588,110 B2 (Ex. 1001, “the ’110 patent”). Headwater Research LLC (“Patent Owner”) did not file a Preliminary Response.

Under 35 U.S.C. § 314 (2024), an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition and for the reasons explained below, we determine that Petitioner has shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims.

Thus, we institute an *inter partes* review of claims 1–30 of the ’110 patent on all presented challenges. 37 C.F.R. § 42.108(a) (2024) (“When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”); *see also SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

B. *Real Parties in Interest*

Petitioner identifies Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. as real parties in interest. Pet. 97. Patent Owner identifies itself as the real party in interest. Paper 3, 1.

C. *Related Matter*

The parties identify *Headwater Research LLC v. Samsung Electronics Co., Ltd.*, 2:23-cv-00641 (E.D. Tex.) as a related matter. Pet. 98; Paper 3, 1.

D. The '110 Patent (Ex. 1001)

The '110 patent issued on November 19, 2013 from an application filed on September 13, 2012 that is a continuation of an application filed on March 2, 2009 and claims priority to four provisional applications, the earliest of which was filed on January 28, 2009. Ex. 1001, codes (22), (45), (60), (63), 1:9–29.

Figure 9 of the '110 patent is below reproduced.

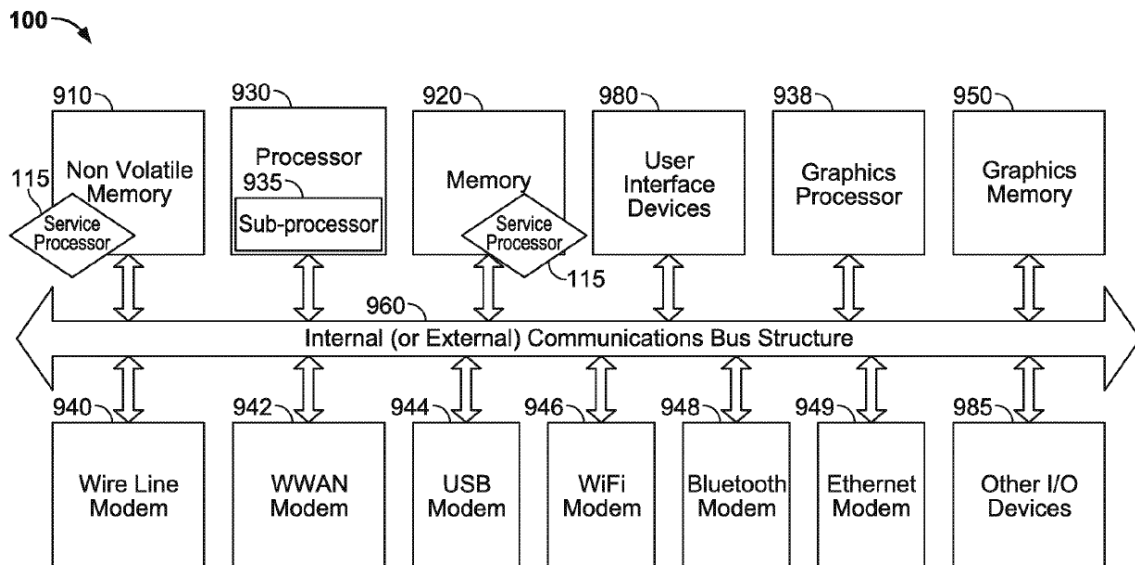


FIG. 9

Figure 9 shows “a hardware diagram of a device that includes a service processor.” Ex. 1001, 2:24–25. Device 100 includes service processor 115 stored in non-volatile memory 910 and memory 920. *Id.* at 26:43–47. Service processor 115 conducts “data plane traffic policy implementation.” *Id.* at 12:40–42. “[S]ervice processor 115 includes various components, such as device agents, that perform service policy implementation or management functions.” *Id.* at 15:58–16:2.

Device 100 also includes processor 930; one or more modems such as wire line modem 940, WWAN modem 942, USB modem 944, and Wi-Fi

modem 946; and user interface devices component 980 for communicating with user interface devices, such as keyboards and displays. Ex. 1001, 26:53–54, 27:39–44, 28:40–43.

E. Illustrative Claim

The '110 patent includes 30 claims, all of which Petitioner challenges. Of the challenged claims, claims 1, 26, and 27 are independent, and claim 1 is below reproduced.

1. A wireless device comprising:
 - one or more modems for enabling the wireless device to communicate over at least two wireless networks, the at least two wireless networks comprising a first wireless network and a second wireless network;
 - a user interface;
 - memory configured to store:
 - a first service policy associated with the first wireless network, the first service policy configured to at least assist in reducing data usage associated with a first service activity over the first wireless network, the first service activity being less than all service activities available to the wireless device, the first service policy for enabling control of the first service activity on the first wireless network that is different from how the first service activity is controlled on the second wireless network; and
 - one or more processors for executing one or more agents, the one or more agents configured to:
 - obtain, through the user interface, a user input specifying at least an aspect of the first service policy,
 - identify that the wireless device is connected to the first wireless network,
 - identify an intended, attempted, or successful data communication over the first wireless network, the intended, attempted, or successful data communication over the first wireless network being associated with the first service activity, and
 - apply the first service policy.

Ex. 1001, 162:21–49.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Jones	US 8,285,850 B1, issued Oct. 9, 2012	1006
Cunningham	US 2006/0019632 A1, published Jan. 26, 2006	1010
Rao	US 2006/0039354 A1, published Feb. 23, 2006	1007
Bocking	US 2006/0075090 A1, published Apr. 6, 2006	1009
Padmanabhan	US 2006/0203739 A1, published Sept. 14, 2006	1011
Jobs	US 2007/0149252 A1, published June 28, 2007	1005
Ibrahim	US 2008/0026787 A1, published Jan. 31, 2008	1012

Petitioner also provides a Declaration of Dr. Patrick McDaniel. Ex. 1003.

G. Asserted Grounds

Petitioner asserts that claims 1–30 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	References/Basis
1–16, 19, 21, 23, 24, 27–30	103(a) ¹	Jobs, Jones, Rao
17, 18, 24	103(a)	Jobs, Jones, Rao, Bocking
20	103(a)	Jobs, Jones, Rao, Cunningham
22	103(a)	Jobs, Jones, Rao, Padmanabhan
25	103(a)	Jobs, Jones, Rao, Ibrahim
26	103(a)	Jobs, Jones, Rao, Bocking, Cunningham

Pet. 1–2.

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’110 patent issued from an application filed before that date, our citations to 35 U.S.C. § 103 in this Decision are to its pre-AIA version.

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

Petitioner contends that the challenged claims of the ’110 patent are unpatentable under § 103. Pet. 1–2. A claim is unpatentable under § 103 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) where in evidence, so-called secondary considerations. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

B. Level of Ordinary Skill in the Art

Petitioner’s declarant opines that a person of ordinary skill in the art would have had “(1) at least a bachelor’s degree in computer science, electrical engineering, or a related field, and (2) at least two years of industry experience in wireless communications security.” Ex. 1003 ¶ 24. The declarant also opines that “[a]dditional advanced education could compensate for a deficiency in work experience, and *vice-versa*.” *Id.*

As noted above, Patent Owner has not yet responded. Based on the record at this stage, we preliminarily adopt the level of ordinary skill provided by Petitioner’s declarant to determine whether there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner contends that independent claim 26 recites a device with several “means for” performing functions without reciting structure and, thus, those limitations should be construed under 35 U.S.C. § 112, ¶ 6. Pet. 3 (citing Ex. 1001, 165:20–38). Petitioner also contends that the ’110 patent describes a device with a processor, service processor 115 being implemented on the processor, and the implementation being accomplished

in part or whole in software stored or executed on the processor. *Id.* at 3–5 (citing Ex. 1001, 26:43–37:2, Figs. 9–15). According to Petitioner, “[s]ince the service processor is implemented on the processor, the corresponding structure for each of the ‘means for’ elements is a processor configured to perform respective algorithm steps for the recited function corresponding to each element.” *Id.* at 5 (citing Ex. 1003 ¶ 52).

Petitioner specifically asserts with citations to the record the functions and corresponding structures for each of the “means for” limitations. Pet. 5–11. After reviewing Petitioner’s arguments and evidence, we adopt Petitioner’s proposed interpretations.

In particular, regarding “means for obtaining, through a user interface of the wireless device, a user input specifying at least an aspect of a first service policy,” we preliminarily agree that the function is “obtaining, through a user interface of the wireless device, a user input specifying at least an aspect of a first service policy” and “the corresponding structure includes a [user interface (UI)] and a processor configured to perform the algorithm steps of providing the user with information and accepting user choices or preferences on, e.g., service plan selection or change, and/or other service related information, settings, and/or options.” Pet. 6–7 (citing Ex. 1001, 27:15–29, 28:41–48, 65:41–51, Fig. 42D; Ex. 1003 ¶¶ 53–55).

Regarding “means for identifying that the wireless device is connected to the first wireless network,” we preliminarily agree that the function is “identifying that the wireless device is connected to the first wireless network” and “the corresponding structure includes a processor configured to perform the algorithm steps of recognizing the type of network to which the device is currently connecting, e.g., by looking up the

information in a local or network table.” Pet. 7 (citing Ex. 1001, 27:15–29, 51:4–13; Ex. 1003 ¶¶ 56–59).

Regarding “means for identifying an intended, attempted, or successful data communication over the first wireless network, the intended, attempted, or successful data communication being associated with the first service activity,” we preliminarily agree that the function is “identifying an intended, attempted, or successful data communication over the first wireless network, the intended, attempted, or successful data communication being associated with the first service activity” and “the corresponding structure includes a processor configured to perform the algorithm steps of implementing traffic inspection points between the applications and the networking stack application interface using a T-buffer at socket connections and feeding the side traffic into a traffic flow analyzer.” Pet. 8–9 (citing Ex. 1001, 29:10–32, 53:51–55, 53:58–63, Fig. 16; Ex. 1003 ¶¶ 60–64).

Regarding “means for applying the first service policy,” we preliminarily agree that the function is “applying the first service policy” and “the corresponding structure includes a processor configured to perform the algorithm steps of performing a service control that reduces traffic speed for all applications and traffic types successively until the service usage projections are within service usage limits for the present service billing period.” Pet. 9–11 (citing Ex. 1001, 43:38–49:1, Fig. 16; Ex. 1003 ¶¶ 65–68).

Petitioner submits “that the remaining claim terms do not require a formal construction for purposes of demonstrating that the claims are obvious,” “reserves the right to respond to any constructions offered by Patent Owner or adopted by the Board,” and “reserves the right to pursue different constructions before the district court.” Pet. 2–3 (citing Ex. 1003

¶¶ 45–68). At this stage, we do not need to interpret expressly any other claim term. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms that . . . are in controversy, and only 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))).

D. Asserted Obviousness of Claim 1 Based on Jobs, Jones, and Rao

1. Jobs (Ex. 1005)

Jobs “relate[s] to user interfaces for portable communication devices.” Ex. 1005 ¶ 1. Figure 3 of Jobs is below reproduced.

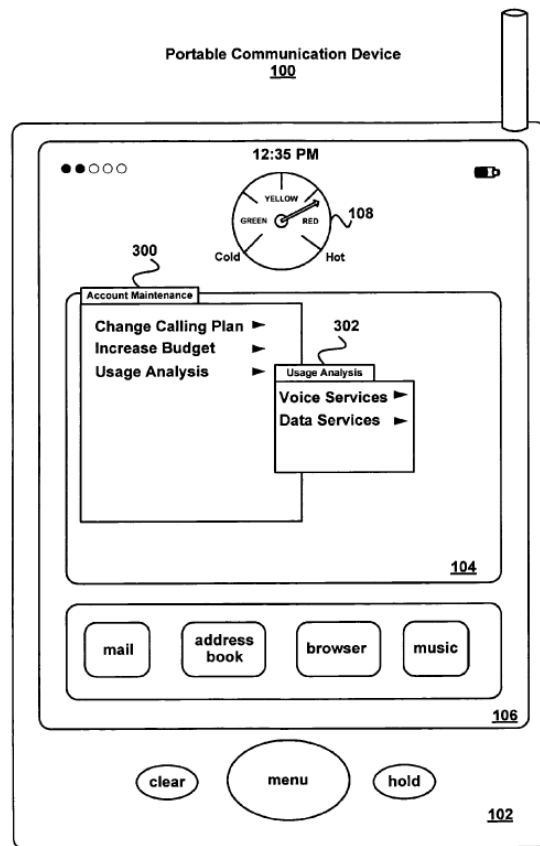


Figure 3

Figure 3 shows “a user interface that includes a pull-down menu containing account-related actions.” Ex. 1005 ¶ 12. Portable communication

device 100 includes display surface or graphical user interface (“GUI”) 102 and graphical objects 108. *Id.* ¶ 16. Graphical object 108 can be “an ‘analog’ type meter” that indicates remaining account balance or usage rate. *Id.* ¶¶ 18, 19.

In another embodiment, portable communication device 500 includes “computer readable-mediums 502 (often called memory or storage devices)” and “radio frequency (RF) circuitry 508” that “is used to send and receive information over a wireless link or network to one or more other devices.” Ex. 1005 ¶¶ 40, 42, Fig. 5. “[O]ne or more processors 518 run various software components stored in the medium 502 to perform various functions for the device 500.” *Id.* ¶ 46. “RF circuitry 508 includes various software components for handling the transmission and receipt of data via the RF circuitry 508.” *Id.* ¶ 48; *see also id.* ¶ 44 (listing what the term “data” includes).

2. *Jones (Ex. 1006)*

Jones “relates to computer networks and, more particularly, to protecting data within computer networks.” Ex. 1006, 1:8–9. In one embodiment of Jones, client devices are connected to a network, and “each client compris[es] a data transfer controller and at least two data transfer rules.” Ex. 1006, 2:5–8; *see also id.* at 1:17–22 (describing that “each mobile computer may connect to a network via modem, wireless local area network (LAN), direct wired LAN, wireless connection through a wide area network (WAN) . . . among other methods dependent upon the available connection options”); 3:28–32 (describing “mobile clients may be connected to enterprise network 100 via various combinations of modem banks, direct LAN connections, wireless connections, and WAN links, etc.”).

“The data transfer controller associates each of at least two connection states with one of the data transfer rules.” Ex. 1006, 2:8–10. In particular, the data transfer controller “detects a connection state of a client device, applies a first data transfer rule to the client device in response to detecting a first connection state, and applies a second data transfer rule to the client device in response to detecting a second connection state.” *Id.* at 2:10–15; *see also id.* at 5:13–29 (describing further rules that may be applied).

Jones also describes that “[b]ackup frequency and storage location may depend on a variety of factors including the urgency of data protection, availability of media storage space, network connection state, and enterprise policies.” Ex. 1006, 3:48–51; *see also id.* at 1:60–67 (stating that “an enterprise data protection strategy may prefer to adjust the frequency of data backups according to the identity of the user, the type of connection, and/or the bandwidth of the connection” and that “it may be desirable to determine whether to backup individual files based on the combination of file size and connection type”).

Figure 3 of Jones is below reproduced.

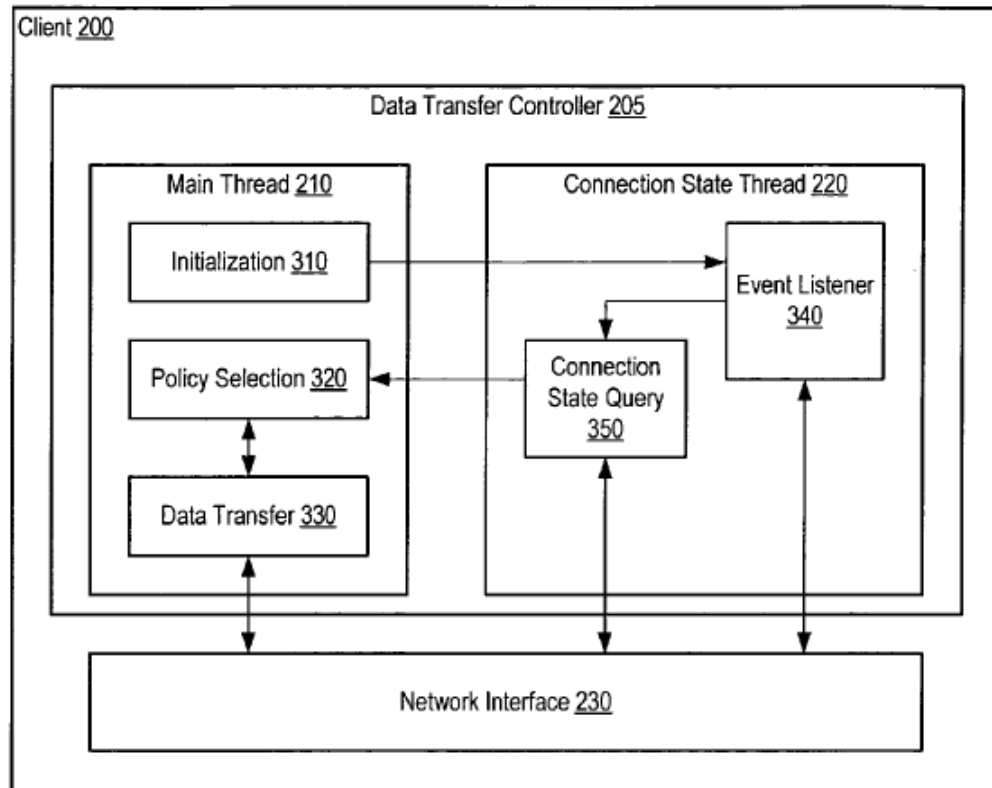


FIG. 3

Figure 3 “is a block diagram of one embodiment of the software components of a client.” Ex. 1006, 2:51–52, 4:27–28. “Client 200 may be . . . a mobile client” and “may include data transfer controller 205” and “code for performing . . . policy selection 320, and data transfer 330.” *Id.* at 3:58, 4:28–36. “Policy selection 320, in response to receiving an update to the connection state, may apply one or more rules to data transfer 330.” *Id.* at 4:45–47. “[A] user may be presented with a graphical user interface through which each policy may be selected and configured in successive operations.” *Id.* at 6:38–41.

3. Rao (Ex. 1007)

Rao relates particularly “to techniques for application-aware prioritizations of network communications on a client.” Ex. 1007 ¶ 2.

Figure 5A of Rao is below reproduced.

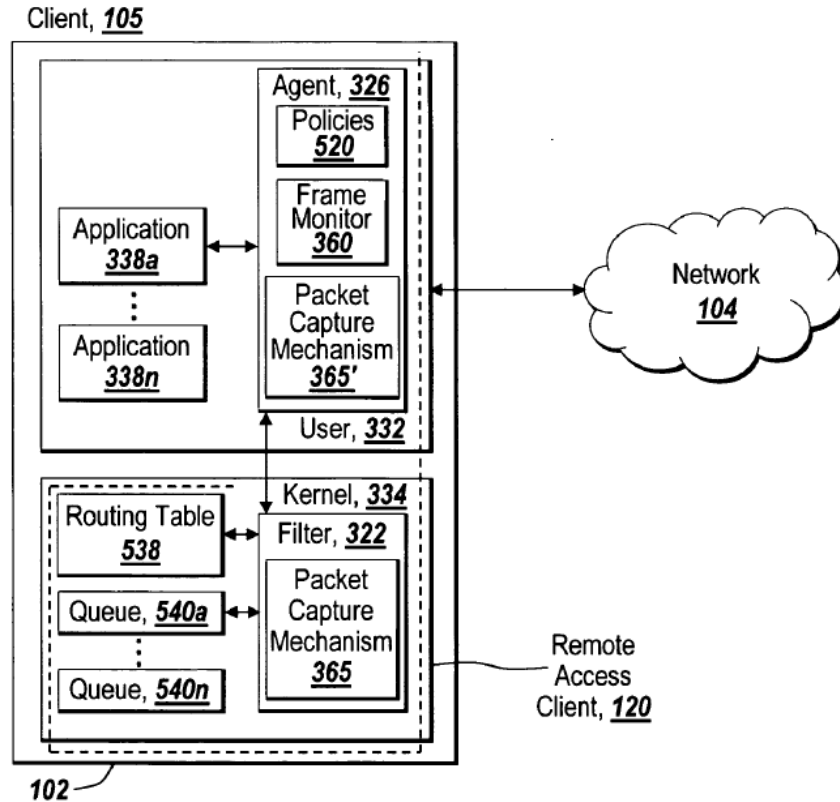


Fig. 5A

Figure 1C “is a block diagram depicting an environment of a client for providing client-side application-aware prioritization techniques.” Ex. 1007 ¶ 70. Central processing unit 120 processes instructions from a main memory unit and can include a network interface to Local Area Network, Wide Area Network, or the Internet through a variety of connections, such as wireless connections. *Id.* ¶¶ 119, 125. Remote access client (“RAC”) 120 “provides for the intelligent and client centric prioritization of

application network communications on a client based on the type and/or priority of an application can optimize real-time data communications.” *Id.* ¶ 179; *see also id.* ¶¶ 180–195 (describing agent 326 intercepting network traffic of applications 338 of client 105, storing and arranging network packets in queues 540a–540n based on levels of priority, and accessing policies 520 for specifying prioritization), Fig. 5A.

4. *Independent Claim 1*

Petitioner argues that, to the extent the preamble is limiting, Jobs teaches “a wireless device” because the portable communication device of Jobs communicates with other devices using RF communication protocols and couples to the Internet and wireless LAN. Pet. 28–29 (citing Ex. 1003 ¶¶ 208, 209; Ex. 1005 ¶¶ 40, 42, 44, 48); *see also id.* at vii (labeling the preamble “[1.1]”). Petitioner also argues that Jones’s client discloses “a mobile client.” *Id.* at 29 (citing Ex. 1006, 3:58).

For “one or more modems for enabling the wireless device to communicate over at least two wireless networks, the at least two wireless networks comprising a first wireless network and a second wireless network,” Petitioner argues that Jobs describes a device with processors that communicate with Internet, LANs, WANs, and the like and RF circuitry that sends and receives information over a wireless link. Pet. 29 (citing Ex. 1003 ¶¶ 210–212; Ex. 1005 ¶¶ 42, 45); *see also id.* at vii (labeling the limitation “[1.2]”). Petitioner also argues that Rao includes network interface 118 for interfacing with a LAN or WAN. *Id.* (citing Ex. 1007 ¶ 125). Petitioner further argues that from Jobs and Rao, one of ordinary skill in the art would have understood that the proposed combination includes modems for communicating over networks, such as GSM, CDMA, and WLAN. *Id.* at 29–30 (citing Ex. 1003 ¶ 213).

For “a user interface,” Petitioner argues that Jobs describes user interfaces for portable communication devices that include a display surface or graphical user interface 102. Pet. 30–31 (citing Ex. 1003 ¶¶ 214–216; Ex. 1005 ¶¶ 1, 12, 16, Fig. 3); *see also id.* at vii (labeling the limitation “[1.3]”). Petitioner also argues that Jones teaches a graphical user interface and that Rao teaches its “agent provides ‘a configuration mechanism such as a user interface.’” *Id.* at 31 (citing Ex. 1006, 6:38–41; Ex. 1007 ¶ 183).

For “memory configured to store,” Petitioner argues that Jobs describes computer-readable mediums 502 for storing data. Pet. 31–32 (citing Ex. 1003 ¶ 217; Ex. 1005 ¶¶ 40, 45); *see also id.* at vii (labeling the limitation “[1.4]”). Petitioner also argues that one of ordinary skill in the art would have understood from Jones and Rao that policies are instruction that are stored in memory and from Jones that policies are associated with wireless networks. *Id.* at 32 (citing Ex. 1003 ¶¶ 218, 219; Ex. 1006, 1:17–22, 5:13–19; Ex. 1007 ¶ 119). Petitioner further argues that Jobs, Jones, and Rao describe that service policies can specify action aspects, alter data transfer frequency, prohibit data transfer, determine transmission priority, and set resource usage thresholds. *Id.* at 32–33 (citing Ex. 1003 ¶ 220; Ex. 1005 ¶¶ 2, 18, 19; Ex. 1006, 1:60–64, 5:25–26, claim 7; Ex. 1007 ¶¶ 179–195).

Regarding a memory configured to store “a first service policy associated with the first wireless network, the first service policy configured to at least assist in reducing data usage associated with a first service activity over the first wireless network,” Petitioner argues that the proposed combination includes policies that reduce data usage associated with service activities, because Jones teaches policies that adjust the frequency of data backups or prohibit data backups according to connection type. Pet. 33

(citing Ex. 1003 ¶¶ 221–224; Ex. 1006, 1:60–67, 5:25–26); *see also id.* at vii (labeling the limitation “[1.5]”).

For “the first service activity being less than all service activities available to the wireless device,” Petitioner argues that media download or backup would be less than all available service activities that would also include email, web browsing, and others. Pet. 33 (citing Ex. 1003 ¶¶ 225–226; Ex. 1005 ¶ 44; Ex. 1006, 5:4–12); *see also id.* at vii (labeling the limitation “[1.6]”).

For “the first service policy for enabling control of the first service activity on the first wireless network that is different from how the first service activity is controlled on the second wireless network,” Petitioner argues that Jones teaches a first policy for reducing frequency of backups when on GSM cellular and a different frequency for backups when on CDMA cellular. Pet. 34 (citing Ex. 1003 ¶¶ 227–238; Ex. 1006, 1:60–64, claim 7); *see also id.* at vii (labeling the limitation “[1.7]”). Petitioner also argues that, in another example, a policy of Jones permits backups when on a GSM network, but another policy does not when on a CDMA network. *Id.* at 34–35 (citing Ex. 1003 ¶ 237; Ex. 1006, 5:25–26). Petitioner further argues that, in Rao, a first policy for GSM networks assigns packets to one queue, and a second policy for CDMA networks assigns packets to a different queue. *Id.* at 35 (citing Ex. 1003 ¶ 238; Ex. 1007 ¶¶ 182, 184).

For “one or more processors for executing one or more agents, the one or more agents configured to,” Petitioner argues that Jobs teaches processors 518 that run software components stored in medium 502 for performing various functions. Pet. 36 (citing Ex. 1005 ¶ 46); *see also id.* at vii (labeling the limitation “[1.8]”). Petitioner also argues that one of ordinary skill in the art would have understood that “agent” refers to

software components to perform various device functions based on the '110 patent and that the '110 patent describes service processors include, for example, “policy control agent,” “service monitor agent,” and “billing agent” implemented in software to be performed on various components. *Id.* at 35–36 (citing Ex. 1001, 28:7–11, Fig. 16; Ex. 1003 ¶ 240; Ex. 1005 ¶ 46). Petitioner further argues that the proposed combination would include agents, such as those for policy selection, data transfer, frame monitoring, and packet capture mechanism. *Id.* at 36–37 (citing Ex. 1003 ¶¶ 239–244; Ex. 1005, Fig. 5; Ex. 1006, 4:27–36, Fig. 3; Ex. 1007 ¶¶ 179–180, Figs. 1C, 5A).

For agents configured to “obtain, through the user interface, a user input specifying at least an aspect of the first service policy,” Petitioner argues that Jones teaches a user configuring policies for data transfers through a graphical user interface and Rao teaches an agent providing a configuration mechanism, such as a user interface. Pet. 37–38 (citing Ex. 1006, 5:15–29; Ex. 1007 ¶ 183); *see also id.* at vii (labeling the limitation “[1.9]”). Petitioner, thus, argues that the proposed combination would obtain user input via the user interface of Jones or Rao for aspects of policies related to conditions and actions. *Id.* at 38 (citing Ex. 1003 ¶¶ 245–248; Ex. 1006, 1:60–64, 5:15–29; Ex. 1007 ¶ 183).

For agents configured to “identify that the wireless device is connected to the first wireless network,” Petitioner argues that Jones teaches detecting connection state that corresponds to connection type, policies based on connection type, and devices connecting via wireless connections. Pet. 38–39 (citing Ex. 1003 ¶ 250; Ex. 1006, 3:28–32, 5:20–26); *see also id.* at vii (labeling the limitation “[1.10]”). Petitioner, thus, argues that the

proposed combination would identify the device being connected to a GSM network. *Id.* at 39 (citing Ex. 1003 ¶¶ 249–250).

For agents configured to “identify an intended, attempted, or successful data communication over the first wireless network, the intended, attempted, or successful data communication over the first wireless network being associated with the first service activity,” Petitioner argues that Jones teaches moving data between a client and other network-connected devices and applying policies to those data transfers. Pet. 39 (citing Ex. 1006, 4:46–47, 5:4–12, Fig. 3); *see also id.* at vii–viii (labeling the limitation “[1.11]”). Petitioner also argues that one of ordinary skill in the art would have understood from Jones identifying an intended or attempted data transfer for applying policies. *Id.* (citing Ex. 1003 ¶¶ 252–256).

Petitioner further argues that Rao teaches its client intercepting packets from an application, using policy to assign those packets to a priority queue, and communicating packets according to the priority. Pet. 39–40 (citing Ex. 1003 ¶ 255; Ex. 1007 ¶¶ 179–195). Petitioner, thus, argues that the proposed combination would communicate data over a first network, such as GSM cellular, associated with a first activity, such as backup, among other networks, such as CDMA cellular. *Id.* at 40 (citing Ex. 1005 ¶ 42; Ex. 1006, 5:25–26).

For agents configured to “apply the first service activity,” Petitioner argues that Jones teaches detecting connection state of a client device, associating the detected connection state with data transfer rules, applying a data transfer rule to the client device in response to the detected connection state, and adjusting data backup frequency based on network type. Pet. 40 (citing Ex. 1003 ¶ 258; Ex. 1005 ¶ 42; Ex. 1006, 1:61–64, 2:8–13); *see also id.* at viii (labeling the limitation “[1.12]”). According to Petitioner, one of

ordinary skill in the art would have understood from Jones that reducing backup frequency would be applying a first policy. *Id.* (citing Ex. 1003 ¶¶ 257–258; Ex. 1005 ¶ 42; Ex. 1006, 3:48–51). Petitioner additionally argues that Rao teaches its client intercepting packets from an application, using policy to assign those packets to a priority queue, and communicating packets according to the priority. *Id.* at 40–41 (citing Ex. 1003 ¶ 259; Ex. 1007 ¶ 184).

a) Petitioner’s Asserted Reason for Combining

Petitioner argues that Jobs describes a portable device with applications and Jones explains that data on mobile computing devices should be protected with a backup mechanism. Pet. 19–20 (citing Ex. 1003 ¶¶ 141–142; Ex. 1005 ¶¶ 17, 19, 40, 42, 44, 50; Ex. 1006, 1:47–50). According to Petitioner, the resulting device would be a wireless device with the memory, processors, modems, and operating system of Jobs with the data transfer controller of Jones for detecting connection state and applying policies to allow or prohibit data transfer. *Id.* at 20–21 (citing Ex. 1003 ¶¶ 144–146; Ex. 1005, Fig. 5; Ex. 1006, code (57), 2:5–15, 2:29–40, 5:13–32, Fig. 3).

Petitioner also argues that, as described by Jobs, a service provider through a service plan enables network access, and if a trigger occurs because, for example, a predefined amount of resources is used or usage rates are exceeded, usage metrics are presented and a UI can enable users to alter resource limits. Pet. 21–22 (citing Ex. 1003 ¶¶ 147, 148; Ex. 1005 ¶¶ 2, 19, 33, 34, 36, 42, 50, Fig. 3).

Petitioner further argues that the proposed combination would include the backup software of Jones because the ordinarily skilled artisan “would have understood that devices, such as in Jobs, can become disabled, and thus

would have been motivated to include a backup capability so data from applications (e.g., contacts, photos, etc.), per Jobs, are protected.” Pet. 22 (citing Ex. 1003 ¶ 149; Ex. 1006, 1:47–49). According to Petitioner, the proposed combination in view of Jones would also “reduc[e] network usage on certain networks by altering the frequency of or prohibiting data transfer, depending on policy decisions” and have “policies that prohibit data transfer over certain connection types.” *Id.* (citing Ex. 1003 ¶¶ 149, 150; Ex. 1006, 1:55–58, 5:25–26); *see also id.* at 22–23 (citing Ex. 1003 ¶¶ 151–152; Ex. 1006, 1:60–64, 4:37–48, 5:13–15, 5:25–32, 6:38–41).

Petitioner additionally argues that the ordinarily skilled artisan would have looked to Rao, “which teaches the benefits of sharing bandwidth by prioritizing traffic from some applications over others to improve device efficiency,” when multiple applications are competing for network bandwidth, to obtain “more sophisticated control,” and better “user experience by prioritizing packets.” Pet. 23–24 (citing Ex. 1003 ¶¶ 154–158; Ex. 1005 ¶ 44; Ex. 1007 ¶ 103). The proposed combination, Petitioner argues, would include Rao’s RAC “which provides policy-based priority queuing based on factors such as application name, application type, among other ‘ways to define client-side application priorities.’” *Id.* at 24–25 (citing Ex. 1003 ¶¶ 159–160; Ex. 1005, Fig. 5; Ex. 1006, Fig. 3; Ex. 1007 ¶ 182, Fig. 5A).

Petitioner also explains how the proposed combination would monitor the network interface, apply data transfer rules, specify policies, determine actions for network activities based on policies, and transmit packets according to assigned priority. Pet. 25–27 (citing Ex. 1003 ¶¶ 161–165; Ex. 1006, 1:60–65, 5:13–15, 5:25–32, 6:38–41; Ex. 1007 ¶¶ 182–184). Petitioner contends that the components of the proposed combination would

operate in combination the same as they did alone. *Id.* at 27 (citing Ex. 1003 ¶¶ 166–171; Ex. 1006, 5:13–6:23; Ex. 1007 ¶ 184).

Petitioner also contends that one of ordinary skill in the art would have had a reasonable expectation of success in making the proposed combination because it “would have required only routine programming knowledge” within ordinary skill and “would have amounted to nothing more than the use of a known technique to improve similar mobile devices in a similar way and combining prior art elements according to known methods to yield the predictable results.” Pet. 27–28 (citing Ex. 1003 ¶ 172). According to Petitioner, the processor of the proposed combination would have been configured to perform or assist in performing the operations discussed above in view of Jobs. *Id.* at 28 (citing Ex. 1003 ¶ 173; Ex. 1007 ¶ 46).

b) Petitioner Shows a Reasonable Likelihood of Prevailing

Based on the present record, Petitioner shows a reasonable likelihood of prevailing in its challenge that the combination of Jobs, Jones, and Rao teaches, suggests, or would have been understood to disclose the limitations of claim 1 and that one of ordinary skill in the art would have combined these references in the manner asserted with a reasonable expectation of success.

E. Asserted Obviousness of Claims 2–30

Petitioner argues with citations to the record that claims 2–16, 19, 21, 23, 24, and 27–30 are unpatentable over Jobs, Jones, and Rao. Pet. 41–60. Petitioner also argues with citations to the record that (1) claims 17, 18, and 24 are unpatentable over Jobs, Jones, Rao, and Bocking; (2) claim 20 is unpatentable over Jobs, Jones, Rao, and Cunningham; (3) claim 22 is unpatentable over Jobs, Jones, Rao, and Padmanabhan; (4) claim 25 is

unpatentable over Jobs, Jones, Rao, and Ibrahim; and (5) claim 26 is unpatentable over Jobs, Jones, Rao, Bocking, and Cunningham. *Id.* at 62–67, 68–71, 72–76, 79–94.

For the reasons discussed above, we preliminarily determine that Petitioner demonstrates a reasonable likelihood of prevailing with respect to its obviousness challenge to independent claim 1. We, therefore, institute review on all challenged claims on all grounds set forth in the Petition. 37 C.F.R. § 42.108(a); *see also SAS*, 138 S. Ct. at 1354.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and the cited evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in proving that at least one of claims 1–30 of the ’110 patent is unpatentable, and thus, we institute an *inter partes* review of all challenged claims on all presented challenges. 37 C.F.R. § 42.108(a).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–30 of U.S. Patent No. 8,588,110 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 8,588,110 B2

IPR2024-01337
Patent 8,588,110 B2

shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

For PETITIONER:

W. Karl Renner
Jeremy J. Monaldo
Jennifer J. Huang
FISH & RICHARDSON P.C.
IPR39843-0179IP1@fr.com
PTABInbound@fr.com
axf-ptab@fr.com
jjm@fr.com
jjh@fr.com

FOR PATENT OWNER:

Reza Mirzaie
Dale Chang
Amy Hayden
James A. Milkey
Neil Rubin
Philip X. Wang
RUSS, AUGUST & KABAT
rmirzaie@raklaw.com
dchang@raklaw.com
ahayden@raklaw.com
jmilkey@raklaw.com
nrubin@raklaw.com
pwang@raklaw.com
rak_headwater@raklaw.com