

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TARGET CORPORATION,
Petitioner,

v.

PROXICOM WIRELESS, INC.,
Patent Owner.

IPR2020-00904
Patent 7,936,736 B2

Before BRIAN J. McNAMARA, CHARLES J. BOUDREAU, and
SEAN P. O'HANLON, *Administrative Patent Judges*.

McNAMARA, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. BACKGROUND

On November 10, 2020, we instituted an *inter partes* review of claims 1, 5–8, 10, 12, 14, 15, 18, and 20–22 (the “challenged claims”) of U.S. Patent No. 7,936,736 B2 (“the ’736 patent”). Paper 11 (“Dec. to Inst.”). Patent Owner filed a Patent Owner Response (Paper 19, “PO Resp.”), Petitioner filed a Petitioner Reply (Paper 21, “Pet. Reply”), Patent Owner filed a Sur-reply (Paper 22, PO Sur-reply), and a transcript of an oral hearing held on August 18, 2021 (Paper 28) has been entered into the record.

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). We base our decision on the preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

Having reviewed the arguments of the parties and the supporting evidence, we conclude that Petitioner has demonstrated by a preponderance of the evidence that all of the challenged claims are unpatentable.

II. THE ’736 PATENT

The ’736 patent is “generally concerned with facilitating the exchange of information and transactions between two entities associated with two wireless devices when the devices are in close proximity to each other.” Ex. 1001, 2:56–60. According to the ’736 patent, disadvantages of direct communication between short-range devices using WiFi or Bluetooth techniques include the risk that two such devices will lose their ability to communicate when they no longer are in close proximity and the risk of exposure of locally stored sensitive information or fraud by unauthorized spoofing devices. *See id.* at 2:22–47. The ’736 patent addresses these and other issues with a system “utilizing both a short range and a long range wireless capability.” *Id.* at 2:54–55.

Figure 1 of the ’736 patent is reproduced below.

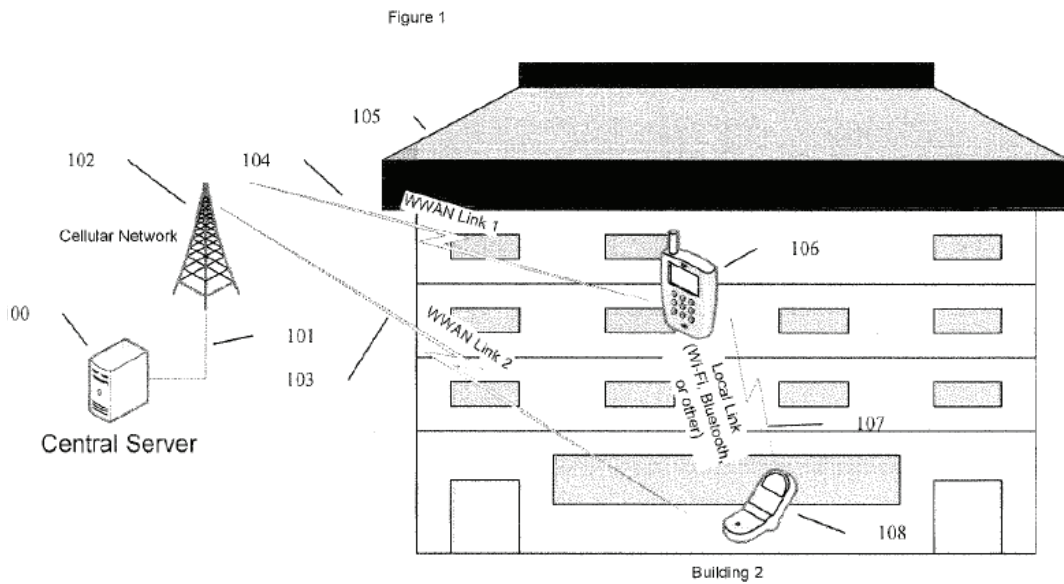


Figure 1 of the '736 patent

Figure 1 of the '736 patent “is a block diagram of two mobile devices utilizing a preferred embodiment.” Ex. 1001, 5:3–4. Devices 106, 108 communicate over short-range wireless link 107 (such as a Bluetooth IEEE802.15.1 link or a WiFi IEEE802.11 link) to allow a device, e.g., device 106, to detect the presence of other devices, e.g., device 108. *Id.* at 6:31–35. Devices 106, 108 use wide area wireless network connections 103, 104 (such as IS-2000, WCDMA, GPRS, EDGE, LTE, Wi-Max (IEEE802.16)), to communicate to central server 100 and perform actual substantive communications, e.g., for device 106 to communicate with device 108. *Id.* at 6:35–39. Device 108 uses short-range wireless link 107 and wide area wireless link 103 in a similar manner to communicate with device 106. *Id.* at 6:39–42. Wireless link 107 is used only for the detection process or to advertise a device’s presence to pass a “wireless identifier” (or “identifier”) between devices 106 and 108 during the proximity detection process. *Id.* at 6:43–51. Facilitating communication between the devices

Ex. 1001, 8:32–41. “[P]olicy based permission associated with each account and applied to information associated with that account” “can be used to determine what information and under [what] circumstances information may be disclosed to another device or user associated with another account.” *Id.* at 8:51–59.

Figure 9 of the ’736 patent is shown below.

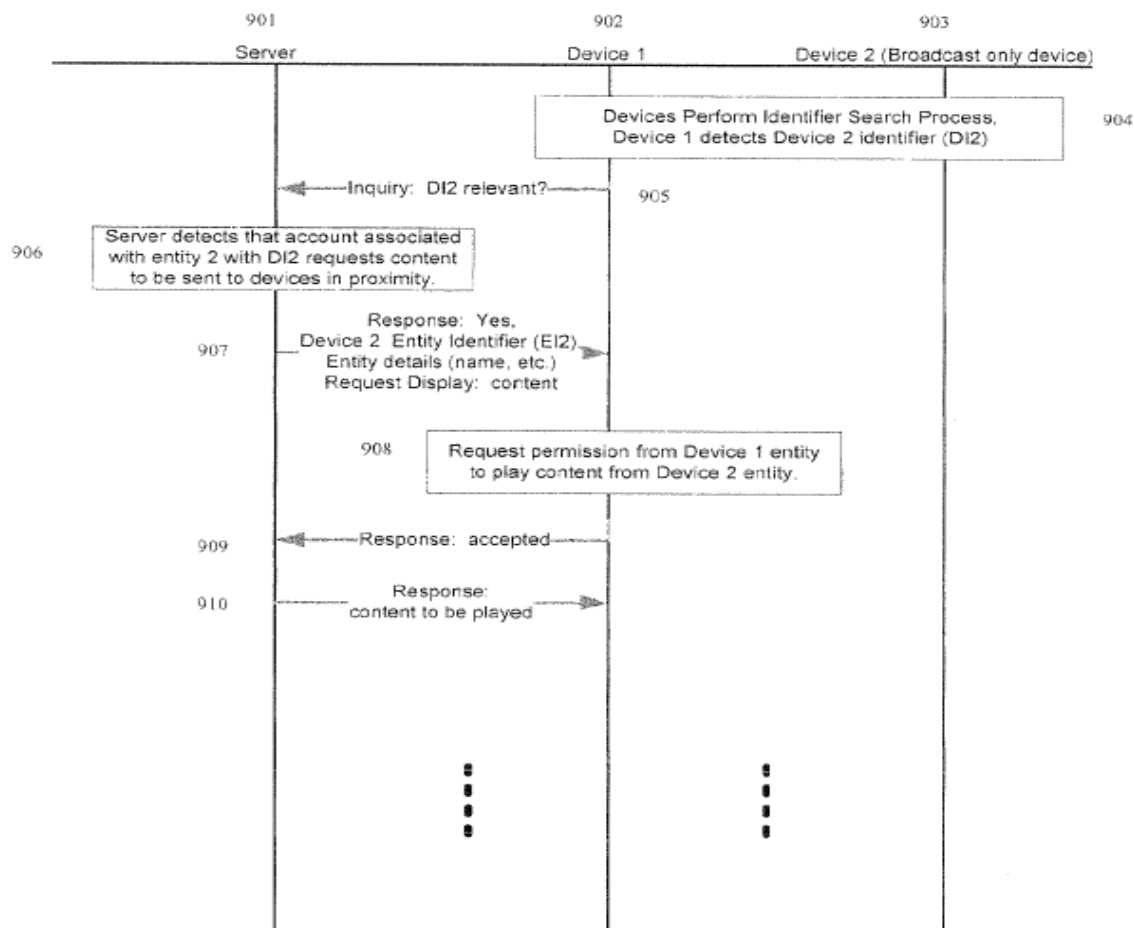


Figure 9 of the ’736 patent

Figure 9 illustrates a grocery store example in which customer device 902 (Device 1) scans for identifiers (step 904) and detects identifier DI2 transmitted from device 903. *Id.* at 14:36–43. At step 905, customer device 902 (Device 1) sends a message to server 901 inquiring if device identifier

DI2 is relevant to the entity (customer) associated with the customer device (Device 1) and if information associated with device identifier DI2 is available for return. *Id.* at 14:43–47. At step 906, server 901 retrieves the accounts associated with identifier DI2 and customer device 902 (Device 1). *Id.* at Fig. 9. Server 901 detects that there is a coupon and other multimedia content available for download to customer device 1 and that the settings in the customer account allow for notification of broadcast devices in proximity. *Id.* at 14:49–55. Server 901 retrieves and sends a response message (step 907) indicating the presence of the detected device and the content available. *Id.* at 14:56–58. At step 908, permission is requested from the entity associated with customer device 1 (the customer) to play content from the entity associated with Device 2, e.g., to download a coupon and other available content. Message 909 from customer device 1 accepting the content is sent to server 901, and response message 910 begins content delivery from the server to Device 1. *Id.* at 14:58–65.

III. ILLUSTRATIVE CLAIM

Claim 1, reproduced below with the paragraph designations used in the Petition, is illustrative of the subject matter of the '736 patent.

1[pre]. A method for a central server utilizing one or more wireless Wide Area Network connections to exchange information between one or more applications executing on first and second wireless devices, the central server performing the steps of:

[1.a] receiving first identification information from the first wireless device, the first identification information communicated from the first wireless device to the server via the wireless Wide Area Network,

[1.b] wherein the first identification information is associated with one or more of an identifier of the first wireless

- device or an entity associated with the first wireless device,
- [1.c] receiving second identification information, as collected by the first wireless device from the second wireless device via a separate local wireless link between the first and second wireless devices, and wherein the second identification information is communicated from the first wireless device to the server via the wireless Wide Area Network connection,
 - [1.d] wherein the second identification information is associated with one or more of an identifier of the second wireless device or an identifier of an entity associated with the second wireless device;
 - [1.e] retrieving disclosure policy data associated with the second identification information, the disclosure policy data representing rules for privacy of information concerning the second wireless device or privacy of information concerning an entity associated with the second wireless device;
 - [1.f] comparing the information disclosure policy data and the first identification information; and
 - [1.g] providing further information to the first wireless device concerning the entity associated with second wireless device, but only to the extent that it is consistent with the step of comparing the information disclosure policy data.

IV. GROUNDS OF INSTITUTION

We instituted *inter partes* review of the '736 patent on all grounds asserted in the Petition. Petitioner asserts that the challenged claims would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 5–7, 10, 12, 15, 18, 20, 21	102 ¹	Eagle ²
1, 5–8, 10, 12, 14, 15, 18, 20–22	103	Eagle
8, 14, 22	103	Eagle, Mgrdechian ³

V. CLAIM CONSTRUCTION

Throughout the proceedings, neither party proposed a special definition or explicit construction of any claim term. *See* Dec. to Inst. 11; PO Resp. 9–10. For purposes of this Decision, we apply the plain and ordinary meaning to the claim language.

VI. ANALYSIS OF PRIOR ART CHALLENGES

A. Introduction

Petitioner challenges claims as anticipated under 35 U.S.C. § 102 and obvious under 35 U.S.C. § 103. Pet. 9. “In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), amended 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Given that the application from which the ’736 patent issued was filed before this date, the pre-AIA versions of §§ 102 and 103 apply.

² U.S. Patent Appl. Publ. No. US2005/0250552 A1, published Nov. 10, 2005 (Ex. 1004)

³ U.S. Patent No. 7,545,784 B2, issued June 9, 2009 (Ex. 1005)

persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burdens of proof in *inter partes* review). 35 U.S.C. §316(e) provides that Petitioner has the burden to demonstrate unpatentability by a preponderance of the evidence.

I. Anticipation

“Anticipation is a question of fact[,] as is the question of what a [prior art] reference teaches.” *In re NTP, Inc.*, 654 F.3d 1279, 1297 (Fed. Cir. 2011). “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *see also Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008) (to anticipate a patent claim under 35 U.S.C. § 102, “a single prior art reference must expressly or inherently disclose each claim limitation”). Moreover, “[b]ecause the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

Whether a reference anticipates is assessed from the perspective of an ordinarily skilled artisan. *See Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003) (“[T]he dispositive question regarding anticipation [i]s whether one skilled in the art would reasonably understand or infer from the [prior art reference’s] teaching that every claim element

was disclosed in that single reference.” (emphasis omitted) (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991))).

Additionally, “[u]nder the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.” *MEHL/Biophile Int’l Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999) (citation omitted); *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349–50 (Fed. Cir. 2002).

2. Obviousness

As set forth in 35 U.S.C. § 103(a),

[a] patent may not be obtained . . . if 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.

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 ordinary skill in the art; and (4) when in evidence, objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); see *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court 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; accord *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, Petitioner must articulate a reason why a person of ordinary skill in the art would have combined the prior art references. *In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

A reason to combine or modify the prior art may be found explicitly or implicitly “in market forces; design incentives; the ‘interrelated teachings of multiple patents’; ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent’; and the background knowledge, creativity, and common sense of the person of ordinary skill.” *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009) (quoting *KSR*, 550 U.S. at 418–21).

Before determining whether a claim would have been obvious in light of the prior art, we consider any relevant evidence of secondary considerations of non-obviousness. *See Graham*, 383 U.S. at 17. Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of non-obviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary skill. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). No evidence of secondary considerations of non-obviousness has been made of record in this proceeding.

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish the unpatentability of the challenged claims by a preponderance of the evidence.

B. Claims 1, 5–7, 10, 12, 15, 18, 20, and 21 As Anticipated By or Obvious Over Eagle

1. Eagle (Ex. 1004)

Eagle discloses communication devices that identify nearby like devices and send a notification to a remote server. Ex. 1004, code (57). “When a notification message is received at the server identifying two devices that have come within range of one another, the server compares the profile data associated with each of the two identified devices and facilitates communications between the devices when appropriate.” *Id.* Eagle “uses personal area wireless network devices, such as Bluetooth transceivers, to identify social proximity and a large area wireless network, such as a cellular phone network or the Internet, to permit interest matching functions to be performed at a remote central server and to instigate person-to-person interactions between selected devices . . . near each other.” *Id.* ¶ 10.

In Eagle, “[e]ach cellular phone keeps a log of other devices that have been previously detected and, whenever a new device comes within range, a notification message is transmitted to a remote server via the long-range cellular phone network.” Ex. 1004 ¶ 4. The notification message contains identification information for the requesting device and the nearby device whose presence has been detected and a value indicating the user’s willingness to receive alert messages from the server when new devices come within range. *Id.* When a server receives a notification message identifying two devices in range of each other, the server fetches profile data

associated with each of the identified devices and calculates a value indicating the extent to which the two profiles match. *Id.* ¶ 5. Users can “associate weighting values with information about themselves and others, and use these weighting values to specify the information’s importance to be assigned to different data when calculating a similarity metric,” or score, by extracting commonalities between two user’s profiles and summing the user defined weighting values. *Id.* at ¶ 12. If the calculated value exceeds a threshold associated with a device, the server sends to each device an alert message containing information that describes the nearby device to the extent the owner has consented to the information being revealed. *Id.* ¶¶ 6–7. A device user can supply profile information indicating the extent to which the profile of the detected nearby devices must match the requestor’s interests before an alert message is sent. *Id.*

Figure 2 of Eagle is reproduced below:

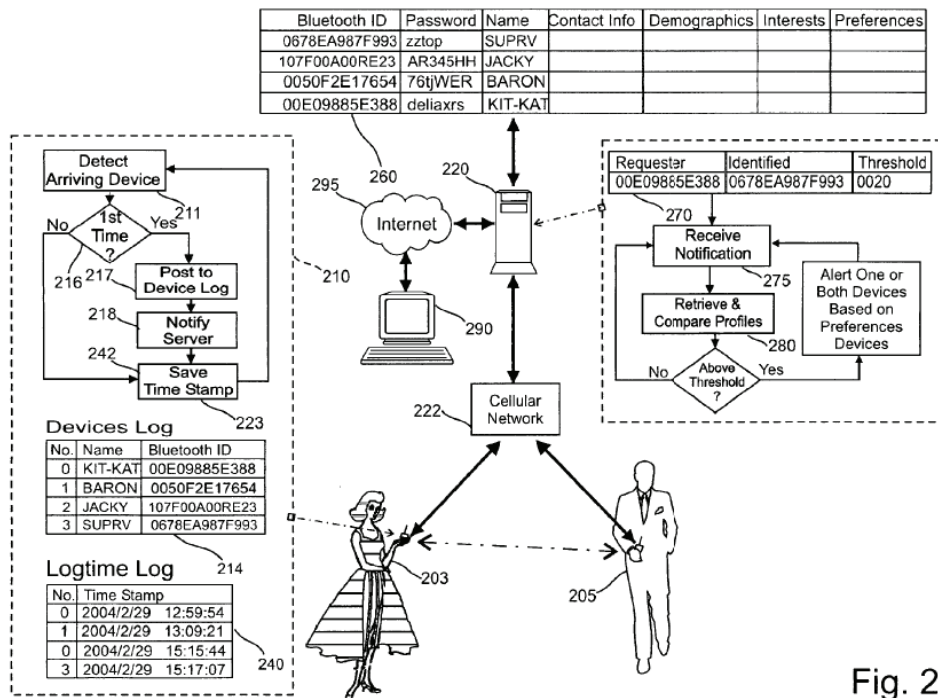


Fig. 2

Figure 2 of Eagle

Figure 2 is a block diagram illustrating the principal components of Eagle's system. Ex. 1004 ¶ 16. Figure 2 of Eagle shows BlueAware application program 210 ("BlueAware") installed to execute on each cellular phone, e.g., a device operated by first user 203, allowing user 203's device to register itself with remote server 220 and create a profile data template that can be populated by the device owner using the cellular phone or using PC 290 connected to server 220 via Internet 295. *Id.* ¶¶ 22, 29. The BlueAware application maintains on each device a Devices Log 214 and a Logtime Log 240. *Id.* ¶¶ 22, 23, Fig. 2. When a nearby second device, e.g., user 205's device, is detected (step 211) by user 203's device, the BlueAware application in user 203's device compares the Bluetooth ID of the nearby user 205's device with the content of Devices Log 214 in user 203's device. *Id.* ¶ 22. If the Bluetooth ID of nearby user 205's device has not been detected previously by user 203's device, the Bluetooth ID of user 205's device is posted in Devices Log 214 and Logtime Log 240 of first user 203's device, and user 203's device sends a request message to remote server 220 via cellular network 222. *Id.* ¶ 23. If the detected second device of user 205 is already recorded in Devices Log 214 of user 203's device, an entry is made in Logtime Log 240. *Id.* The BlueAware application uses the timestamp data in Logtime Log 240 of each device to determine whether to transmit a notification message to the server. *Id.* ¶ 24. For example, in order to conserve memory, "the BlueAware application may periodically remove the identification and time stamp data for devices [that] have been out of range for an extended time" period; this requires that a device transmit a new notification when it detects a device that has been removed from its log. *Id.*

A notification message from a Bluetooth device, e.g., from user 203's device, to server 220 may consist of the Bluetooth ID (BTID) of the requesting device (user 203's device), the BTID of another device whose current proximity was detected (user 205's device), and a current threshold value indicating the willingness of the current Requester (user 203) to receive alert messages from the server when new devices (e.g., user 205's device) come within range. *Id.* ¶¶ 4, 51. The two BTIDs are used by the server to retrieve profile data from database 260 and compare the profiles as indicated at step 280 to calculate a similarity score value indicating the degree to which the profiles match; if the similarity score exceeds the thresholds for one or both devices (step 290), an alert message is sent to the corresponding device (step 295). *Id.* The server calculates the similarity score by comparing the sum of weighted values the requestor has assigned to "interest" categories in the two profiles. *Id.* ¶¶ 52–53. Each user's profile data may include data specifying a set of device IDs of friends, friends of friends, or friends of friends of friends, allowing the user to request alert messages be sent from the server only when a device corresponding to a "trusted" person having common interests at a specified level is nearby. *Id.* ¶¶ 4, 56, 66. Eagle also discloses that interaction behavior and proximity can be used to learn patterns, so that a user's profile also may be populated with inferred data, e.g., automatically created lists of friends and likely friends that can be used to create a trust network. *Id.* ¶ 67.

2. *Claim 1*

a) *Preamble*

Petitioner identifies the following as the preamble of claim 1: "[a] method for a central server utilizing one or more wireless Wide Area Network connections to exchange information between one or more

applications executing on first and second wireless devices, the central server performing the steps of.” Pet. 24–25. Petitioner cites Eagle as disclosing a server utilizing a large area wireless network, such as a cellular phone network or the Internet, to exchange information between the server and the BlueAware application running on the Bluetooth enabled phones, e.g., a Requester device (a first wireless device) and an identified device (a second wireless device) that identify themselves with unique identification codes. *Id.* (citing Ex. 1004, code (57), ¶¶ 4, 9–10, 19–20, 22, 48–49, 51; Ex. 1003, Williams Decl. ¶¶ 104–106). Patent Owner does not respond explicitly to Petitioner’s contentions concerning the preamble of claim 1. Based on the evidence of record, we are persuaded that Petitioner has demonstrated Eagle discloses the preamble of claim 1.⁴

b) Claim Limitation 1.a

Petitioner identifies claim limitation 1.a as reciting “receiving first identification information from the first wireless device, the first identification information communicated from the first wireless device to the server via the wireless Wide Area Network.” *See* Pet. 26–27. Petitioner cites Eagle as disclosing that each time a Requester device (the claimed first device) detects a new device, it communicates to a central server (the claimed server), using a long-range cellular network (the claimed wireless Wide Area Network), a notification message (notification message sent from the device to be received by the server), containing its own identifier, such that the server receives the Requester ID (the claimed first identification

⁴ We need not decide whether the preamble is limiting because Petitioner has shown that Eagle discloses the recitation in the preamble. *See Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002) (“Generally, the preamble does not limit the claims.”).

information). *Id.* (citing Ex. 1004 ¶¶ 3, 4, 20, 31, 48, claim 2, Fig. 2; Ex. 1003, Williams Decl. ¶¶ 107–108). Patent Owner does not respond explicitly to Petitioner’s contentions concerning claim limitation 1.a. Based on the evidence of record, we are persuaded that Petitioner has demonstrated Eagle discloses claim limitation 1.a.

c) Claim Limitation 1.b

Petitioner identifies claim limitation 1.b as reciting “wherein the first identification information is associated with one or more of an identifier of the first wireless device or an entity associated with the first wireless device.” *See* Pet. 27–28. Petitioner contends that Eagle discloses each device’s identification information, e.g., Requester ID, which may be in the form of a BTID value, is part of the device’s “profile data” that includes a “name” for the device or its user, thereby associating the Requester ID with the name of the Requester device or its user. *Id.* (citing Ex. 1004 ¶¶ 5, 20, 29, 31, 45, 50; Ex. 1003, Williams Decl. ¶¶ 109–110). Patent Owner does not respond explicitly to Petitioner’s contentions concerning claim limitation 1.b. Based on the evidence of record, we are persuaded that Petitioner has demonstrated Eagle discloses claim limitation 1.b.

d) Claim Limitation 1.c

Petitioner identifies claim limitation 1.c as reciting “receiving second identification information, as collected by the first wireless device from the second wireless device via a separate local wireless link between the first and second wireless devices, and wherein the second identification information is communicated from the first wireless device to the server via the wireless Wide Area Network connection.” Pet. 28–29. Petitioner cites Eagle as disclosing that when devices in close proximity identify themselves, e.g., using a BTID, they exchange ID codes using a short-range

wireless link, so that each device receives the ID code (Identified ID) and includes the ID code in the notification the device sends to a server using a long-range cellular network. *Id.* at 28–30 (citing Ex. 1004 ¶¶ 3–4, 18, 20, 31, 48, claims 2–3, Fig. 2; Ex. 1003, Williams Decl. ¶¶ 111–113). Patent Owner does not respond explicitly to Petitioner’s contentions concerning claim limitation 1.c. Based on the evidence of record, we are persuaded that Petitioner has demonstrated Eagle discloses claim limitation 1.c.

e) Claim Limitation 1.d

Petitioner identifies claim limitation 1.d as reciting “wherein the second identification information is associated with one or more of an identifier of the second wireless device or an identifier of an entity associated with the second wireless device.” Pet. 30. Petitioner cites Eagle as disclosing a profile database that includes a Bluetooth identification value BTID for that device and a short name for the device or its user. *Id.* at 30 (citing Ex. 1004 ¶¶ 48, 50; Ex. 1003, Williams Decl. ¶¶ 114–115). Patent Owner does not respond explicitly to Petitioner’s contentions concerning claim limitation 1.d. Based on the evidence of record, we are persuaded that Petitioner has demonstrated Eagle discloses claim limitation 1.d.

f) Claim Limitation 1.e

Petitioner identifies claim limitation 1.e as reciting “retrieving disclosure policy data associated with the second identification information, the disclosure policy data representing rules for privacy of information concerning the second wireless device or privacy of information concerning an entity associated with the second wireless device.” Pet. 30–31. Petitioner cites Eagle as disclosing “profile data” associated with each device includes the Bluetooth identification value BTID for that device, demographic information, a friends list, and user preferences dictating what information

may be shared with other devices and when it may be shared. *Id.* at 31 (citing Ex. 1004 ¶¶ 5, 50, 56, 57). Petitioner also notes that Eagle discloses each device can be set to establish potential links only to others within a “trust network.” *Id.* (citing Ex. 1004 ¶ 66). Patent Owner does not respond explicitly to Petitioner’s contentions concerning claim limitation 1.e. Based on the evidence of record, we are persuaded that Petitioner has demonstrated Eagle discloses claim limitation 1.e.

g) Claim Limitation 1.f

Petitioner identifies claim limitation 1.f as reciting “comparing the information disclosure policy data and the first identification information.” Pet. 32–33. Petitioner cites Eagle as disclosing that when determining what information in the identified device’s profile can be shared and under what circumstances, the server compares the Requester device’s ID (the Requester ID) to the “trust network” (a set of device IDs) of the identified device to determine whether the Requester device’s ID is within the identified device’s “trust network.” *Id.* at 33 (citing Ex. 1004 ¶¶ 51, 56, 66). Eagle discloses “one or more automatically created lists of likely friends and acquaintances that can be used to create a trust network” (Ex. 1004 ¶ 67) and that a device can be “set to only establish potential links to others within a ‘trust network’” (*id.* ¶ 66). Eagle does not explicitly state the lists of friends and acquaintances are lists of device IDs. However, Eagle does state that “profile data for each user may advantageously include data specifying a set of device IDs for devices owned by ‘friends.’” *Id.* ¶ 56. According to Petitioner, a person of ordinary skill would have understood that for the server to determine whether the Requester ID is within the identified device’s “trust network,” the server would compare the Requestor ID to the set of IDs of the friends in the trust network listed in the profile of the

identified device. Pet. 33–34 (citing Ex. 1004 ¶¶ 5, 50, 56, 66, 67; Ex. 1003, Williams Decl. ¶¶ 119–123). Thus, according to Petitioner, claim limitation 1.f is anticipated by, or at least obvious over, Eagle. *Id.*

Patent Owner contends that Eagle does not teach or suggest “comparing the information disclosure policy data and the first identification information” (the comparing step), as recited in claim limitation 1.f. *See* PO Resp. 15–32. As a threshold matter, Patent Owner contends that by recognizing Eagle does not explicitly disclose the claimed comparison and by relying on what a person of ordinary skill would have understood, the Petition effectively acknowledges that Eagle does not support Petitioner’s anticipation claim 1. *Id.* at 16–17. To the extent Patent Owner argues that Petitioner’s reliance on a person of ordinary skill’s understanding of the reference precludes anticipation, Patent Owner’s argument is unavailing. As discussed above, whether a reference anticipates is assessed from the perspective of an ordinarily skilled artisan, *Dayco Prods.*, 329 F.3d at 1368, and “the dispositive question regarding anticipation [i]s whether one skilled in the art would reasonably understand or infer from the [prior art reference’s] teaching that every claim element was disclosed in that single reference.” *In re Baxter Travenol*, 952 F.2d at 390 (emphasis omitted).

Based on Petitioner’s mapping of Eagle to claim 1, Patent Owner asserts that the challenged claims require (i) that the first wireless device communicate first its own ID (the “Requester ID” in Eagle) and second the ID of the detected device (the “Identified ID” in Eagle) to the server and (ii) that the server compare the first identification information (the Requester ID in Eagle) to the disclosure policy data specifying whether and to what extent information about the entity associated with the second device (the detected device, or the Identified ID in Eagle) may be provided to that

particular first wireless device. PO Resp. 2, 15. Patent Owner argues that Eagle does not teach the recited comparison. *Id.* at 15.

Patent Owner asserts “Petitioner’s theory about the comparison of Element[] 1f . . . is that the claimed comparison occurs when Eagle assesses whether the Requester device is within the identified device’s ‘trust network.’” *Id.* at 13. According to Patent Owner, Eagle does not “support Petitioner’s claim that the Requester ID is compared to the profile associated with the Identified ID or vice versa” because “Eagle’s server uses the Requester ID and the Identified ID to retrieve profile information and then compares the *two retrieved profiles*, assessing ‘the extent to which the profiles match.’” *See id.* at 15–20 (citing Ex. 1004, Abstract, ¶¶ 5, 20, 3). Patent Owner further asserts that, even in the case of mutual friends, it is the third party’s ID that is matched, i.e., friends of the user of the Requestor ID are compared to friends of the user of the Identified ID—there is no comparison of the Requester ID or the Identified ID, as claimed, using Petitioner’s mapping. *Id.* at 21.

Claim 1 recites a method for exchanging information between applications executing on one or more wireless devices in which the first wireless device, e.g., the Requester, uses a local link to collect identification information from the second wireless device, e.g., the Identified Device, and the central server receives from the first wireless device identification information for both the first and second wireless devices. As discussed above, at least in the case where the wireless devices are new to each other, Eagle discloses this same approach, i.e., first user’s device 203 collects identification information from second user’s device 205 and transmits the identification information to server 220. Ex. 1004 ¶¶ 22–23; *see also* Section VI.B.1 herein.

Claim limitation 1.f further recites that the central server retrieves the second wireless device's disclosure policy and compares that disclosure policy with the identification information of the first wireless device. Patent Owner argues that Eagle is different from the claimed subject matter because Eagle discloses that the server retrieves the stored profile corresponding to each device ID (Ex. 1004 ¶ 51) and compares their profiles (*id.* ¶ 53; PO Resp. 17–20). However, Eagle also states that each user's profile may include a set of device IDs of "friends" and that a given user may request that alert messages from the server be sent only when a "trusted" person, i.e., a friend, friend of a friend, etc., is nearby. Ex. 1004 ¶ 56. Eagle teaches the server determines whether a "friend" relationship exists between the users of the devices based on a set of device IDs each user provides the server. *Id.* Based on this teaching, we agree with Petitioner that Eagle discloses, or that it would have been at least obvious for, the server's profile comparison to compare the device IDs in the "friends" list of the second device (included in the claimed information disclosure policy) with the device ID of the "(the claimed first identification information) transmitted to the server, or vice versa, to determine whether a "friend" relationship exists and to communicate that information to the first wireless device. The comparison occurs at least when the devices encounter each other for the first time or when the devices have not encountered each other over a long period, i.e., when one device has removed the other from its device's Device Log. Ex. 1004 ¶¶ 23–24.

Petitioner and Patent Owner agree that determining whether a device is within an Eagle "trust network" is distinct from comparing interests to determine the existence of common interests. Pet. Reply 5; PO Sur-reply 3. Asserting that Eagle does not compare the Requester ID (of the user's

device) to the profile associated with the Identified ID (the newly detected device), Patent Owner accuses Petitioner of “ignoring the specific teachings of Eagle’s ‘trust network’ and Eagle’s approach to profile comparison.” PO Sur-reply 3. According to Patent Owner, “Petitioner’s argument that ‘determining if a user is “trusted” includes determining if a “friend” relationship exists between the users’ (Reply, 6) does not accurately reflect Eagle’s operation or its ‘trust network’” (PO Sur-reply 4) because “Eagle’s ‘trust network’ only makes sense when it refers to those at least one degree away from an individual’s ‘friends’ list or ‘social circle.’” *Id.* at 5–6 (quoting Ex. 1004 ¶ 66 (“Users become part of a trust network when they are within one degree of an individual’s social circle, *i.e., a friend-of-a-friend.*” (emphasis by Patent Owner))). Emphasizing that “Eagle is intended to allow for introductions of new people who are expected to be trusted,” Patent Owner states that “a known friend may be ‘trusted’ in the general sense, but this does not mean that a known friend would be part of what Eagle calls its ‘trust network.’” PO Sur-reply 5.

According to Patent Owner, in Eagle, the Requester ID is not compared to a list of friends in the profile information associated with the Identified ID; instead, based on Eagle’s trust network, a friends-to-friends comparison takes place, *i.e.*, the friends of the Requester ID are compared to the friends of the users of the Identified ID. PO Resp. 21–22. Petitioner asserts that “PO’s mischaracterization of Eagle would illogically place ‘friends’ and ‘likely friends’ outside the trust network (thereby restricting the information shared with them), while allowing mere ‘friends-of-friends’ to receive private profile information not available to the public.” Pet. Reply 7.

Although Eagle discloses the potential for friend-to-friend communications, Eagle also encompasses communications based on the Requester ID and the Identified ID. Patent Owner's narrow focus on the expression "trust network" fails to credit Eagle's disclosure of a "trusted person," as described in Eagle's paragraph 56, cited by Petitioner. *See* Pet. 33. As Petitioner points out, Eagle explicitly discloses each user's profile data may include data specifying a set of device IDs for devices owned by "friends." Pet. 21, 30–34; Pet. Reply 3; Ex. 1003, Williams Decl.

¶¶ 119–123. Eagle states the following:

The profile data for each user may advantageously include data specifying a set of device IDs for devices owned by "friends." The server may then identify persons who are "friends of friends" or "friends of friends of friends". A given user may then request that alert messages be sent only when such a "trusted" person having common interests is nearby. . . . [A] user may assign a weight to the "friend list" data to indicate the relative importance that should be assigned to the fact that an encountered person may be a friend of one or more friends.

Ex. 1004 ¶ 56.

Petitioner emphasizes that Eagle's comparisons include both a privacy aspect and an interest aspect. Pet. Reply 4–5; *see also* Ex. 1004 ¶ 66 ("The system allows for a large variation in privacy constraints."). Indeed, paragraph 56 of Eagle describes the server imposing a further condition on sending alerts, i.e., the server sends alerts "only when a 'trusted' person having common interests is nearby." Ex. 1004 ¶ 56. Paragraph 56 of Eagle teaches that one can become a "trusted person" in two ways: (1) by being included in the user's profile as one of the IDs in the set of device IDs identified as owned by friends, or (2) by the server identifying the owner of an encountered device as a friend of a friend, or a friend of a friend of a

friend. *Id.* In particular, “by processing proximity data, a given user’s profile may be further populated with inferred data, such as one or more automatically created lists of likely friends and acquaintances that can be used to create a trust network.” *Id.* ¶ 67. Thus, Eagle explicitly describes the server further populating a user’s profile, which already includes a set of device IDs owned by friends, with “automatically created lists of likely friends” that make up a trust network. Eagle’s server uses those profiles (i.e., compares both the IDs for trusted persons and their common interests) to determine whether it sends an alert to the device associated with the Requester ID (the claimed first device) when the device associated with the Requester ID (or an entity associated with the Requester ID) is in close proximity to the device having the Identified device ID (the claimed second device), e.g., by comparing the disclosure policy of the device associated with the Identified ID (the second device) with the list of IDs in the Requester’s profile, as recited in claim limitation 1.f. *See* Ex. 1004 ¶¶ 53, 66.

Patent Owner’s argument that Eagle describes users becoming part of a trust network when they are within one degree from an individual’s social circle (a friend of a friend) or a network expanded to several degrees, e.g., a friend of a friend of a friend, does not negate the fact that a friend identified by a device ID in a user profile is a “trusted person” in Eagle. Ex. 1004 ¶ 56. Eagle discloses that a user may request alerts be sent only to trusted persons. *Id.* As discussed above, Eagle discloses that BTIDs are used by the server to retrieve profiles from database 260 to compare the profiles. *Id.* ¶¶ 4, 45, 51. Eagle also discloses identifying a “trusted person,” e.g., a friend, by specifying a set of user IDs. *Id.* ¶ 56. Although Eagle does not state explicitly that the server compares the Requester ID to the list of IDs in

the retrieved profile, Eagle's discloses that BTIDs are used "to fetch the corresponding profile data" for interest comparison. *Id.* ¶ 51. As there would be no need for an interest comparison unless the BTID indicated the user is a "trusted person" (*id.* ¶ 56), we are persuaded that Petitioner has shown Eagle discloses the comparison recited in claim limitation 1.f to a person of ordinary skill and therefore discloses claim limitation 1.f.

Even if, contrary to our above conclusion, Eagle did not disclose the procedure for effecting such a comparison for purposes of anticipation, we agree with Petitioner that effecting such a comparison in the server would have been an obvious expedient. *See* Pet. 33–34. As the device associated with the Identified ID in Eagle identifies a friend by its membership in a set of user-specified device IDs, comparing the device ID of each device in the friend list with the device ID of the requestor (or vice versa) is a routine way of generating an alert that a friend is in proximity of the Requester. The server would generate lists of likely friends that includes device IDs as well and use those IDs to perform the same comparison with the Requester ID. It would be cumbersome and inefficient for the server to change from the method used for performing the comparison for friends by comparing IDs to some other form of identification for likely friends identified by the server. The scope of the alert and the information revealed in the alert may be varied by the extent to which the profiles match and the context in which the devices encounter each other, e.g., a tradeshow vs. an airport, as recited in claim limitation 1.g. *Id.* ¶ 57. Thus, even if Eagle did not disclose claim limitation 1.f, we find that the limitation would have been obvious over Eagle.

h) Claim limitation 1.g

Petitioner identifies as claim limitation 1.g the recitation “providing further information to the first wireless device concerning the entity associated with the second wireless device, but only to the extent that it is consistent with the step of comparing the information disclosure policy data.” Pet. 34. Petitioner argues that in Eagle the degree to which information may be revealed can be varied based on the threshold value and the mode, and that the profile of a device may entitle it to receive information not otherwise available to the general public. *Id.* at 35–36 (citing Ex. 1004 ¶¶ 7, 20, 57, 60; Ex. 1003, Williams Decl. ¶¶ 124–127). Petitioner further notes that whether an alert message is sent from remote server 200 to one or both devices, the content of that message may be based upon whether the Requester device is in the “trust network” of the identified device. *Id.* (citing Ex. 1004 ¶¶ 7, 20, 56–57, 60, 66–67).

Patent Owner contends that Eagle does not disclose “providing further information to the first wireless device,” as recited in claim limitation 1.g because, as Patent Owner argued with respect to claim limitation 1.f, Eagle teaches comparing the degree to which profiles match, but does not teach comparing the Requester ID with the profile information associated with the Identified ID. PO Resp. 32–33.

As discussed above, Patent Owner’s arguments concerning claim limitation 1.f are unavailing because Eagle teaches a privacy aspect that limits sending alert messages to devices identified as being associated with trusted persons. *See* Section VI.B.2.g herein. We also are persuaded by Petitioner’s arguments that Eagle discloses providing information only to the extent permitted by a user’s disclosure policy. *See* Ex. 1004 ¶ 57 (“Each user may also set the extent to which information will be provided to

requesters.”), ¶ 63 (disclosing that, by using a “mode indicator value transmitted with the threshold value[,] . . . the same user may supply profile data for use in professional encounters, and other profile data for use in social encounters”). Thus, we agree with Petitioner that Eagle discloses claim limitation 1.g to a person of ordinary skill.

i) Conclusion as to claim 1

For the reasons discussed above, we find that Petitioner has demonstrated Eagle discloses all of the limitations of claim 1 to a person of ordinary skill and anticipates claim 1. Even if Eagle did not disclose the procedure for comparing user profiles as recited in limitation 1.f, we conclude that comparing the device IDs, e.g., BTIDs, would be a routine and obvious expedient for determining whether a device triggers an alert message and that claim 1 would have been obvious over Eagle.

3. Claim 5

Claim 5 depends from claim 1 and further recites “the disclosure policy data defines communication preferences for the entity associated with the second wireless device that comprise one or more of: do not allow notification of my presence; allow notification of my presence; disclose my name/do not disclose my name; disclose age/do not disclose age; or do or do not disclose personal details.” Ex. 1001, 24:20–27.

In addition to its discussion of Eagle’s disclosures concerning claim limitation 1.e, Petitioner cites Eagle as disclosing that in accordance with communication preferences, a user can vary the operational mode of a phone to control the frequency and content of alert messages transmitted by the server and that the profile database can contain a short name for the device or its user, contact information, demographic information, or other preference data. Pet. 36–37 (citing Ex. 1004 ¶¶ 7, 12, 56–57).

Patent Owner does not respond explicitly to Petitioner’s contentions that claim 5 is anticipated by or would have been obvious over Eagle. Having considered all the evidence and arguments of record, we are persuaded that Petitioner has demonstrated Eagle discloses or suggests to one of ordinary skill all of the limitations of claim 5. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 5 is anticipated by or would have been obvious over Eagle.

4. *Claim 6*

Claim 6 depends from claim 5 and recites “wherein the step of providing further information to the first wireless device concerning the entity associated with second wireless device is based on at least one of: a priority of the second wireless device identifier; a class the second wireless identifier belongs to; a list the second wireless identifier is included on; and/or a list the second wireless identifier is not included on.” Ex. 1001, 24:28–35.

In addition to its analysis of claim limitations 1.f and 1.g, Petitioner cites Eagle as disclosing sending alert messages to the Requester device only if the identified device is included in the Requester device’s trust network. Pet. 37 (citing Ex. 1004 ¶ 56). Petitioner further contends that a person of ordinary skill would have understood that in making this determination, the Identified ID is compared to the trust network. *Id.* at 38 (citing Ex. 1004 ¶¶ 50, 56, 66; Ex. 1003, Williams Decl. ¶ 133).

Patent Owner argues that Petitioner’s mapping of claim 6 “is a different comparison than for Element 1f, where Petitioner relied on a comparison of the *Requester ID* to the ‘trust’ network of the *identified device*.” PO Resp. 35–36 (citing Pet. 33 (Element 1f); Ex. 2010 ¶ 62). Patent Owner further argues (i) that Eagle is directed to sending messages

using devices that had not previously detected each other and therefore seeks to determine whether two people share common interests and would like to meet, and (ii) that Eagle’s comparison of friends list concerns identification of mutual friends, not the comparison relied upon by Petitioner. *Id.* at 37–38.

Petitioner responds that “[a]s set forth in the Petition, Eagle discloses sending a message when the requester device is in the ‘trust network’ of the identified device, and the identified device is also in the ‘trust network’ for the requester device (i.e., a message is sent only if each device is included in the trust network of the other).” Pet. Reply 16 (citing Pet. 37–38; Ex. 1003, Williams Decl. ¶¶ 131–133; Eagle ¶¶ 56–57, 66). Petitioner further argues that its cross reference to claim limitation 1.f in its discussion of claim 6 “explains how Eagle will compare a device ID against a list of friends (or an inferred list of ‘likely friends’) to determine if it is included in another device’s network.” Pet. Reply 17 (citing Pet. 32–34; Ex. 1003, Williams Decl. ¶¶ 110–123).

According to Patent Owner, “[t]he problem with Petitioner’s theories for these dependent claims is not that the Petition cross-referenced its support from Element 1f (Reply, 17), but that Petitioner’s arguments for Element 1f are not supported by Eagle’s teachings; those also relate to comparison of the Requester ID to the profile of the Identified ID, as opposed to comparison of the Identified ID to the profile of the Requester ID for claims 6 and 7.” PO Sur-reply 18.

As discussed above, however, we find that Petitioner has demonstrated that Eagle discloses or suggest to one of ordinary skill claim limitations 1.f and 1.g. Accordingly, we also find that Petitioner has demonstrated Eagle discloses or suggests to one of ordinary skill the

limitations recited in claim 6. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 6 is anticipated by or would have been obvious over Eagle.

5. *Claim 7*

Claim 7 depends from claim 1 and recites “wherein the step of providing further information to the first wireless device concerning the entity associated with second wireless device is based on at least one of: a priority of the second wireless device identifier; a class the second wireless identifier belongs to; a list the second wireless identifier is included on; and/or a list the second wireless identifier is not included on.” Ex. 1001, 24:36–43. These additional limitations are the same as those in claim 6, which depends from claim 5 instead of claim 1. Petitioner cites its analysis of claim 6 as a basis for arguing the additional limitations of claim 7 are disclosed by Eagle. Pet. 38.

Patent Owner presents the same arguments for claim 7 as it did for claim 6. PO Resp. 37–38; PO Sur-reply 18. Accordingly, for the reasons stated in our discussion of claim 6 (*see* Section VI.B.4 above), we find that Petitioner has demonstrated that Eagle discloses the limitations recited in claim 7. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 7 is anticipated by or would have been obvious over Eagle.

6. *Claim 10*

Claim 10 depends from claim 1 and recites “wherein the information disclosure policy data specifies what portions of and/or the circumstances under which the further information is disclosed to the first wireless device.” Ex. 1001, 24:62–65. In addition to citing its analysis of claim limitation 1.e., Petitioner cites Eagle as disclosing the profile database containing

preference data indicating what information may be shared. Pet. 41 (citing Ex. 1004 ¶ 50; Ex. 1003, Williams Decl. ¶¶ 143–144).

Patent Owner does not respond explicitly to Petitioner’s contentions that claim 10 is anticipated by or would have been obvious over Eagle. Having considered all of the evidence and arguments of record, we find that Petitioner has demonstrated Eagle discloses to a person of ordinary skill the limitations recited in claim 10. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 10 is anticipated by or would have been obvious over Eagle.

7. *Claim 12*

Claim 12 depends from claim 1 and recites “wherein the second identification information is received as part of detecting a proximity of a neighboring wireless device.” Ex. 1001, 25:3–5. In addition to its analysis of claim limitation 1.c, Petitioner cites Eagle as disclosing Bluetooth transceivers providing beacons that identify when devices are in proximity. Pet. 41–42 (citing Ex. 1004 ¶¶ 8, 10; Ex. 1003, Williams Decl. ¶¶ 145–147).

Patent Owner does not respond explicitly to Petitioner’s contentions that claim 12 is anticipated by or would have obvious over Eagle. Having considered all of the evidence and arguments of record, we find that Petitioner has demonstrated Eagle discloses to a person of ordinary skill the limitations recited in claim 12. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 12 is anticipated by or would have been obvious over Eagle.

8. *Claim 15*

Independent claim 15, which is an apparatus claim drawn to a server utilizing Wide Area Wireless network connections to exchange information between applications executing on first and second wireless devices, recites

limitations similar to those of method claim 1. *Compare* Ex. 1001, 25:16–52, *with id.* at 23:29–65. Petitioner cites Eagle as disclosing the preamble of claim 15. Pet 42 (referencing Petitioner’s analysis of the preamble of claim 1). As to the first receiver and first identification information features recited in the claim limitations Petitioner designates as limitations 15.a and 15.b, Petitioner references its analysis of claim limitations 1.a and 1.b; as to the second receiver and second receiver identification information features recited in the claim limitations Petitioner designates as limitations 15.c. and 15.d, Petitioner references its analysis of claim limitations 1.c and 1.d. *Id.* at 43–46. As to the data processor (claim limitation 15.e) for storing and retrieving the second disclosure policy associated with the second identification information (claim limitation 15.f), and comparing the information disclosure policy with the first identification information (claim limitation 15.g), Petitioner references its analysis of claim limitations 1.e, 1.f, and 1.g. *Id.* at 46–48. As to claim limitation 15.h, which recites providing further information to the first wireless device concerning the entity associated with the second wireless device to the extent consistent with the comparison to the information disclosure policy, Petitioner references its analysis of claim limitation 1.g. *Id.* at 49.

Patent Owner argues that Eagle does not disclose or suggest to one of ordinary skill claim limitations 15.g and 15.h for the same reasons Eagle does not disclose or suggest corresponding claim limitations 1.f and 1.g. PO Resp. 32–33.

Having determined that Petitioner has demonstrated that Eagle discloses or at least suggests to one of ordinary skill the corresponding limitations of claim 1, and having considered the remaining evidence and argument record concerning claim 15, we find that Petitioner has

demonstrated that Eagle would have disclosed or suggested the limitations of claim 15 to a person of ordinary skill. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 15 is anticipated by or would have been obvious over Eagle.

9. *Claim 18*

Claim 18 depends from claim 15 and recites “the preferences comprise one or more of: do not allow notification of my presence; allow notification of my presence; disclose my name/do not disclose my name; disclose age/do not disclose age; or do or do not disclose personal details.” Ex. 1001, 26:16–22. Apparatus claim 18 recites limitations that are the same as, or similar to, those recited in method claim 5. *Compare id., with id.* at 24:20–27. Petitioner cites its analysis of the limitations in method claim 5 in its challenge to claim 18. Pet. 49–50.

Patent Owner does not respond explicitly to Petitioner’s arguments that claim 18 is anticipated by or would have been obvious over Eagle. Having determined that Petitioner has demonstrated that Eagle discloses or suggests the limitations of claim 15, from which claim 18 depends, and having considered the remaining evidence and arguments of record concerning claim 18, we find that Petitioner has demonstrated that Eagle would have disclosed or suggested the limitations of claim 18 to a person of ordinary skill. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 18 is anticipated by or would have been obvious over Eagle.

10. *Claim 20*

Claim 20 depends from claim 15 and recites “additionally comprising a processor, for making a decision based upon the detected identifiers, the decision depending upon a policy for a selected wireless device regarding

privacy for communication with other wireless devices.” Ex. 1001, 26:28–32. In addition to its analysis of claim limitations 1.f and 15.e, Petitioner cites Eagle as disclosing that the server decides whether to send an alert message based on whether the Identified ID is included in the Rrequester device’s trust network. Pet. 50 (citing Ex. 1004 ¶¶ 56, 66). Noting the challenged ’736 patent acknowledges that it was known to implement a server with one or more processors (*id.* at 22–23 (citing Ex. 1001, 5:66–6:4)), Petitioner contends that at a minimum it would have been an obvious design choice to implement the server using multiple processors, such that an additional processor determines whether the Identified device ID is in the requester’s trust network (*id.* at 51).

Patent Owner does not respond explicitly to Petitioner’s arguments that claim 20 is anticipated by or would have been obvious over Eagle. Having determined that Petitioner has demonstrated that Eagle discloses or suggests the limitations of claim 15, from which claim 20 depends, and having considered the remaining evidence and arguments of record concerning claim 20, we find that Petitioner has demonstrated that Eagle would have disclosed or suggested the limitations of claim 20 to a person of ordinary skill. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 20 is anticipated by or would have been obvious over Eagle.

11. Claim 21

Claim 21 depends from claim 20 and recites “the decision is based on at least one of: a priority of the identifier; a class the identifier belongs to; a list the identifier is included on; and/or a list the identifier is not included on.” Ex. 1001, 26:33–38. In addition to its analysis of claim limitation 1.f and the limitations recited in claims 7 and 20, Petitioner cites Eagle as

disclosing the decision in claim 20 is based on where the identified device ID is included in the Requester device's trust network. Pet. 52 (citing Ex. 1004 ¶¶ 50, 56, 66; Ex. 1003, Williams Decl. ¶¶ 180–181).

Similar to its arguments concerning claims 6 and 7, Patent Owner argues that Petitioner's theories fail for the same reasons Patent Owner argues Eagle does not disclose or suggest claim limitation 1.f. PO Resp. 38.

As discussed above, we are persuaded that Petitioner has demonstrated Eagle discloses or suggests to one of ordinary skill the features of claim limitation 1.f and claims 6 and 7. Having considered all the evidence and arguments of record, we find that Petitioner has demonstrated Eagle discloses the limitations recited in claim 21. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 21 is anticipated by or would have been obvious over Eagle.

C. Claims 8, 14 and 22 As Obvious Over Eagle

1. Claim 8

Claim 8 depends from claim 1 and further recites “returning information to the first wireless device, as a result of the step of comparing the information disclosure policy data, which causes the first wireless device to limit re-sending of identifiers already reported by the first wireless device.” Ex. 1001, 24:44–49. Petitioner asserts that the subject matter recited in claim 8 would have been obvious over Eagle. Pet. 9. Petitioner cites Eagle as disclosing the Requester device sending the server a notification message when a “new” device, i.e., a device not on the Requester device's log, comes within range. *Id.* at 39. Petitioner also notes that Eagle discloses an alert message containing the identified device's profile information is not sent to the Requester unless the profile data of the two devices satisfies a matching criterion. *Id.* at 39. According to

Petitioner, it would have been an obvious implementation to stop sending notification messages requesting a new device's profile information only after an alert message has been received; this would have enabled the Requester to receive an alert message subsequent to a first encounter that did not result in an alert message if the identified device's profile had been updated to allow the Requester to receive such information. *Id.* (citing Ex. 1004 ¶¶ 4, 20, 23–24, 48, 54–55; Ex. 1003, Williams Decl. ¶¶ 136–142).

Patent Owner contends that because Eagle recognizes a battery cost associated with continually scanning and logging the environment of BTIDs, a person of ordinary skill would not have implemented duplicative requests to the server. PO Resp. 41–42. Petitioner responds that a person of ordinary skill would have recognized design trade-offs that facilitate communications and that Eagle's disclosure of complimentary methods of preserving battery life does not diminish the benefits and advantages of modifying Eagle to further its communication goals. Pet. Reply. 19–20. According to Patent Owner, however, Eagle has already struck a balance between battery drain and its desire to establish connections and Petitioner has not demonstrated a person of ordinary skill would have been motivated to modify Eagle as Petitioner proposes. PO Sur-reply 19–20. Patent Owner further argues that Petitioner's proposed modification of Eagle constitutes hindsight and is inconsistent with Petitioner's proposed combination with Mgrdechian, asserted in another ground discussed separately herein, which concerns saving system resources. *Id.* at 21.

Eagle discloses that each device may update its threshold level each time it sends a notification message advising the server that a new discoverable device has come within range. Ex. 1004 ¶ 55. Based on this disclosure in Eagle, we agree with Petitioner that a person of ordinary skill

would have recognized that an alert message may be generated from a device encounter subsequent to an encounter that did not generate an alert. Although we agree with Patent Owner that Eagle considers battery consumption associated with continuous scanning, we find that the trade-off articulated in Eagle supports Petitioner's arguments. Eagle distinguishes older phones having about 18 hours battery life from phones with standby power exceeding 18 hours and describes its BlueAware application as reducing battery consumption by scanning the environment once each minute, rather than continuously. *Id.* ¶ 26. Thus, we agree with Petitioner that a person of ordinary skill would have recognized that Eagle addresses the design trade-offs between facilitating communications and preserving battery life by controlling how often the environment is scanned.

For the reasons discussed above, we find that Petitioner has demonstrated that Eagle discloses, or at least would have at least suggested, the limitations of claim 8 to a person of ordinary skill in the art. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 8 would have been obvious over Eagle.

2. *Claim 14*

Claim 14 depends from claim 1 and further recites: "returning information to the first wireless device, as a result of the step of comparing the information disclosure policy data, which causes the first wireless device to limit other actions previously performed by the first wireless device." Ex. 1001, 25:9–14. Although Petitioner does not assert claim 14 is anticipated by Eagle, Petitioner asserts claim 14 would have been obvious over Eagle. Pet. 9. Petitioner notes that claim 14 is similar to claim 8. *Id.* at 42. In its assertion that claim 14 would have been obvious over Eagle, Petitioner cites its analysis of claim 8. *Id.*

Patent Owner advances arguments similar to those it advanced concerning claim 8. PO Resp. 39–43. Having determined that Petitioner has demonstrated that Eagle discloses the limitations of claim 1, from which claim 14 depends, and further that Eagle teaches or suggests the limitations of claim 8, and having considered the remaining evidence and arguments of record concerning claim 14, we find that Petitioner has demonstrated that Eagle likewise would have disclosed or suggested the limitations of claim 14 to a person of ordinary skill. We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 14 would have been obvious over Eagle.

3. *Claim 22*

Claim 22 depends from claim 15 and further recites “a transmitter, for returning information to the first wireless device, to cause the first wireless device to limit re-sending of identifiers already reported by the first wireless device.” Ex. 1001, 26:39–43. Although Petitioner does not assert claim 22 is anticipated by Eagle, Petitioner asserts claim 22 would have been obvious over Eagle. Pet. 9. Apparatus claim 18 recites limitations that are the same as or similar to those recited in method claim 8. Petitioner cites its analysis of the limitations in method claim 8 in its challenge to claim 22. Pet. 52. Petitioner also cites Eagle as disclosing a message transmitter. *Id.* (citing Ex. 1004, claim 2; Ex. 1003, Williams Decl. ¶¶ 182–184).

Patent Owner advances arguments similar to those it advanced concerning claim 8. PO Resp. 39–43. Having considered all of the evidence and arguments of record, we find that Petitioner has demonstrated Eagle would have disclosed or suggested to one of ordinary skill the additional limitations recited in claim 22. We conclude that Petitioner has

demonstrated by a preponderance of the evidence that claim 22 would have been obvious over Eagle.

D. Claims 8, 14, and 22 As Obvious Over the Combination of Eagle and Mgrdechian

1. Mgrdechian

Mgrdechian discloses a communications system in which a first wireless device with a unique identification, e.g., a Bluetooth ID or an RFID, receives over a local wireless protocol unique identifications of one or more other wireless devices. *See* Ex. 1005, 3:13–42, 3:59–67. A first wireless device can receive identifications (and, in some cases, available locally stored profile information) from other devices in its vicinity in response to a query from the first device or from a broadcast by the other devices. *Id.* at 4:1–3, 6:44–61, 16:10–15. The first wireless device transmits the unique wireless identifications to a remote computer or server over a second wireless network or the Internet and receives from the remote server information associated with the wireless device identifications. *Id.* at 3:59–67, 10:49–53, 16:36–42. For example, in response to a request from a user of the first device (User A), a database query at the server causes the server to generate a reply that includes profile information associated with the device IDs in the request, to the extent the users of the other devices, e.g., User B, have authorized the disclosure of such information. *Id.* at 5:51–65, 10:56–11:4, 16:62–17:12. Authorized profile information associated with each device ID may be viewed and stored on the initiating user's wireless device (the user of Device A) for use in contacting the users of target devices, e.g., Users B and C, at a later time. *Id.* at 12:18–30.

Mgrdechian also discloses that the remote computer can compare the profiles associated with IDs to predefined preferences of the initiating user

(User A), to alert the initiating user to the presence of persons-of-interest. Ex. 1005, 14:55–65. The server may also provide a user with information regarding “friends of friends,” forming a mobile social networking service. *Id.* at 5:36–38.

Mgrdechian teaches an extended range operation embodiment in which a target device returns to the initiating device its device ID and the device IDs of other devices in its range that may not be within the range of the initiating device. Ex. 1005, 19:43–57. With this information, the detection range of the initiating device is extended a distance d_1 (one hop from the target to an out of range device) or by taking the devices in series a further distance, e.g., d_2 (an additional hop from the out of range device to another out of range device). *Id.* at 19:29–67.

Another embodiment in Mgrdechian extends the communication range using a positional database. *See* Ex. 1005, 20:1–47. In this embodiment, the IDs of devices are uploaded to a central server to create a positional database. *Id.* at 20:3–7. For example, if device A issues an ID request and receives responses from devices B and E, device A send the IDs of device B and E to the remote server, causing the remote server to return profile information for devices B and E to device A. *Id.* at 20:9–25. If the positional database of the remote server indicates device C is within the range of device B and if the system is programmed to return information for all users within one hop, the system also will return to device A information associated with device C’s ID. *Id.* at 20:14–30, Fig. 10. Similarly, if the positional database indicates device D is within range of device C and the system is programmed to return information for all users within two hops, the server also returns to device A information associated with device D’s ID. *Id.* at 20:31–35.

2. *Claims 8, 14, and 22*

As claims 8, 14, and 22 recite related subject matter and Patent Owner addresses them as a group, we analyze the parties' positions concerning claims 8, 14, and 22 together. Claim 8 depends from claim 1 and further recites: "returning information to the first wireless device, as a result of the step of comparing the information disclosure policy data, which causes the first wireless device to limit re-sending of identifiers already reported by the first wireless device."

Claim 14 depends from claim 1 and further recites: "returning information to the first wireless device, as a result of the step of comparing the information disclosure policy data, which causes the first wireless device to limit other actions previously performed by the first wireless device."

Claim 22 depends from claim 15 and further recites "a transmitter, for returning information to the first wireless device, to cause the first wireless device to limit re-sending of identifiers already reported by the first wireless device." Claim 22 is similar to claim 8, but presented in the context of an apparatus claim.

As to claim 8, 14, and 22, Petitioner cites Mgrdechian as disclosing that when a server returns some or all of the information associated with a device ID back to the initiating device, the initiating device may store some or all of that information, so that rather than retrieving profile information for all of the devices within its range, the initiating device narrows the list of profiles to be retrieved. Pet. 58 (citing Petitioner's analysis of claim 8; Ex. 1003, Williams Decl. ¶¶ 195–196). Petitioner notes that Eagle discloses sending an Identified ID from a Requester to the server to request an alert message about the Identified device when it is detected for the first time after the Requester's device ID log is cleared and cites Mgrdechian as

disclosing that the first device does not automatically retrieve profile information about a second device from a server when that information is already available to the first device. *Id.* at 53–55 (citing Ex. 1004 ¶¶ 23–24; Ex. 1005, 12:18–44). Petitioner also argues that having a portion of the profile information on the Requester device prevents automatically retrieving profile information by sending additional requests to the server. Pet. 57 (citing Ex. 1005, 15:46–16:2).

Petitioner contends that a person of ordinary skill would have been motivated to combine Mgrdechian’s teachings with those of Eagle to improve Eagle by “limiting unnecessary transmissions after the receipt of an alert message and saving computer resources while ensuring that users still get the most relevant information about entities and devices in proximity.” *Id.* at 54–55 (citing Ex. 1005, 15:46–16:2, Ex. 1003, Williams Decl. ¶ 98).

Patent Owner contends that a person of ordinary skill would not have been motivated to combine the teachings of Eagle with those of Mgrdechian because in Eagle the device log of the requesting device, not the server, already limits re-sending identifiers based on a timestamp that precludes sending messages to the server during a specific time period. PO Resp. 44. As Petitioner notes, however, because Eagle’s device logs are periodically removed, resulting in multiple messages being sent to the server as the devices react over time, a person of ordinary skill would have had reason to employ Mgrdechian’s “more sophisticated way for determining whether detecting a new device warrants transmission of a message to the server.” Pet. Reply. 22 (citing Pet. 53–59; Ex. 1003, Williams Decl. ¶¶ 187–196). Thus, we agree with Petitioner that a person of ordinary skill would have had reason to look to Mgrdechian to improve Eagle’s performance by reducing the number of messages required.

Patent Owner further notes that Petitioner cites to Mgrdechian's "portable profile" described at column 15, line 46–column 16, line 2 of the reference, which is different from the profile discussed by Mgrdechian at column 12, lines 36–44 because the portable profile is not sent by the server. PO Resp. 48. According to Patent Owner, Petitioner's citations of Mgrdechian's portable profile does not support Petitioner's theory because that profile information is not sent from the server, as required by claims 8, 14, and 21. *Id.* at 49–50. Patent Owner contends that Petitioner's analysis of Mgrdechian ignores the claim requirements that the server return information that limits re-sending of identifiers already reported by the first wireless device (claim 8 and 22) and limit actions previously performed by the first wireless device (claim 14). PO Sur-reply 23–24.

Although Petitioner cites to a portion of Mgrdechian that discusses portable profiles, Petitioner contends that Patent Owner's emphasis on Mgrdechian's portable profiles being retrieved from queried devices rather than a central server constitutes a strawman argument because the Petition does not rely on Mgrdechian's disclosure of portable profiles retrieved from a second device. Pet. Reply 23–24. Instead, Petitioner asserts that Mgrdechian's relevant teachings are (1) the system's prevention of automatically retrieving profile information that is already available locally and (2) the earlier disclosure of storing profile information retrieved from the server. Pet. Reply 23–24 (citing Pet 54–55; Ex. 1005, 12:18–44; Ex. 1003, Williams Decl. ¶¶ 190–191). According to Petitioner, it was well known for a device to refer to cached information before requesting information from a server. *Id.* at 24 (citing Ex. 1003, Williams Decl. ¶¶ 96–100, 185–198).

The Petition relies on Mgrdechian as “disclos[ing] the first device saving profile information received from the server about the second device for later use.” Pet. 54 (citing Ex. 1005, 12:23–28; Ex. 1003, Williams Decl. ¶ 97). Noting that Eagle recognizes the benefit of limiting transmissions, e.g., to those devices that have newly come within range, Petitioner cites Mgrdechian as teaching “implementation details for determining whether the detection of a new device warrants transmission of a message to the server.” *Id.* at 55–56 (citing Ex. 1003, Williams Decl. ¶ 99). The subject matter Petitioner cites from Mgrdechian states that a user may select specific target devices for further and subsequent queries, based on the content of initial profile information, rather than retrieving profile information for all device IDs. Ex. 1005 15:46–67. Petitioner’s analysis is based on the first device receiving and saving information from the server during an initial encounter and based on that saved information, the first device declining to send messages to the server in subsequent encounters. We agree with Petitioner’s analysis that this combination of Eagle and Mgrdechian discloses the features recited in claims 8, 14, and 22 because the decision made locally by the first device to limit re-sending of identifiers is based on information previously received from the server.

Having considered all the evidence and arguments of record, we find that Petitioner has demonstrated that a person of ordinary skill would have had reason to combine the teachings of Eagle and Mgrdechian and that the combined teachings would have disclosed the limitations of claim 8, 14, and 22 to a person of ordinary skill in the art. Therefore, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claims 8, 14, and 22 would have been unpatentable as obvious over the combined teachings of Eagle and Mgrdechian.

VII. CONCLUSION⁵

In consideration of the above, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claims 1, 5–7, 10, 12, 15, 18, 20, and 21 are unpatentable under 35 U.S.C. § 102 as anticipated by Eagle; that claims 1, 5–8, 10, 12, 14, 15, 18, and 20–22 are unpatentable under 35 U.S.C. § 103 as obvious over Eagle; and that claims 8, 14, and 22 are unpatentable under 35 U.S.C. § 103 as obvious over Eagle and Mgrdechian.

In summary:

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 5–7, 10, 12, 15, 18, 20, 21	102	Eagle	1, 5–7, 10, 12, 15, 18, 20, 21	
1, 5–8, 10, 12, 14, 15, 18, 20–22	103	Eagle	1, 5–8, 10, 12, 14, 15, 18, 20–22	
8, 14, 22	103	Eagle, Mgrdechian	8, 14, 22	
Overall Outcome			1, 5–8, 10, 12, 14, 15, 18, 20–22	

⁵ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

VIII. ORDER

In consideration of the above, it is:

ORDERED that claims 1, 5–8, 10, 12, 14, 15, 18, and 20–22 are unpatentable; 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.

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