Trials@uspto.gov
571-272-7822

Paper 32
Date: November 30, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TARGET CORPORATION,
Petitioner,

v.

PROXICOM WIRELESS LLC,
Patent Owner.

IPR2020-00980
Patent 8,385,913 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 December 4, 2021, we instituted an *inter partes* review of claims 1–4, 6–10, 12, 15, 17, 19, 21, 32–34, and 39 of U. S. Patent No. 8,385,913 B2 ("the '913 Patent"). Paper 11 ("Dec. to Inst."). Patent Owner filed a Patent Owner Response (Paper 20, "PO Resp."), Petitioner filed a Petitioner Reply (Paper 23, "Pet. Reply") and Patent Owner filed a Sur-reply (Paper 24, "PO Sur-reply"). A transcript of an oral hearing held on September 1, 2021 (Paper 30) 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 '913 PATENT

The '913 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, 2:57–61. According to the '913 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 are no longer in close proximity and the risk of exposure of locally stored sensitive information or fraud by unauthorized spoofing devices. *See id.* at 2:34–48. The '913 patent addresses these and other issues with a system "utilizing both a short range and a long range wireless capability." *Id.* at 2:55–56.

Figure 1 of the '913 patent is reproduced below.

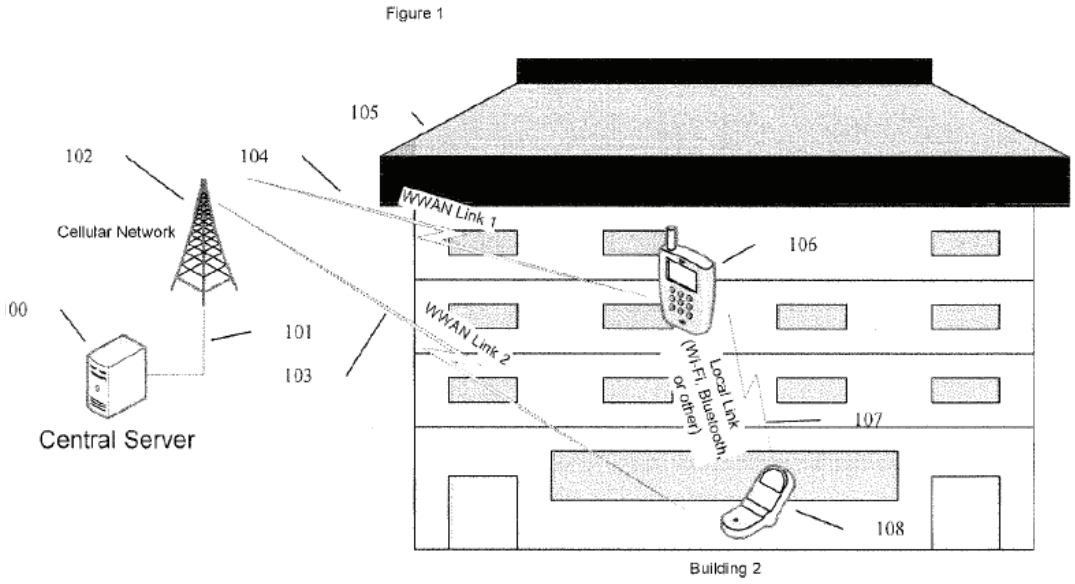

Figure 1 of the '913 patent

Figure 1 of the '913 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, such as 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

using identifiers and standard Wireless Wide Area Network (WWAN) or 3G communications requires less resources than peer to peer communications and allows the devices to continue to communicate when no longer in close proximity. *Id.* at 6:52–67. This approach also allows a central server to control content based on the identity of the device.

Figure 2 of the '913 patent is shown below.

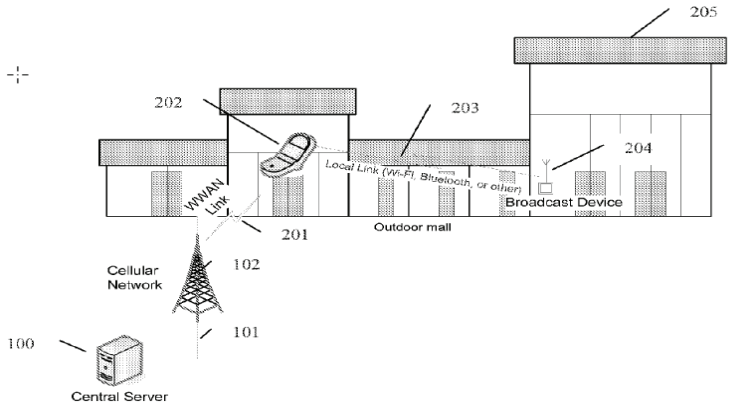

Figure 2 of the '913 patent

Figure 2 is a block diagram of a fixed broadcast device and a mobile device. Ex. 1001, 5:5–6. In a museum application, exhibit associated device 204 does not have a WWAN connection, but advertises its presence by broadcasting a local identifier. *Id.* at 7:28–31. A museum patron's device 202 passes the identifier to central server 100. *Id.* at 7:35–36. Central server 100 recognizes the identifier as being associated with that particular exhibit and passes relevant information content (pictures, text, web pages, games, coupon offers, etc.) to the patron's device 202, even after the patron has left the proximity of exhibit associated device 204. *Id.* at 7:37–49, 8:41–50.

The '913 patent also states that, in a similar way, broadcast device 204 may be associated with an account of an individual or entity that contains personal information and information regarding allowed communication. Ex. 1001, 8:32–41. Policy based permissions 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 '913 patent is shown below.

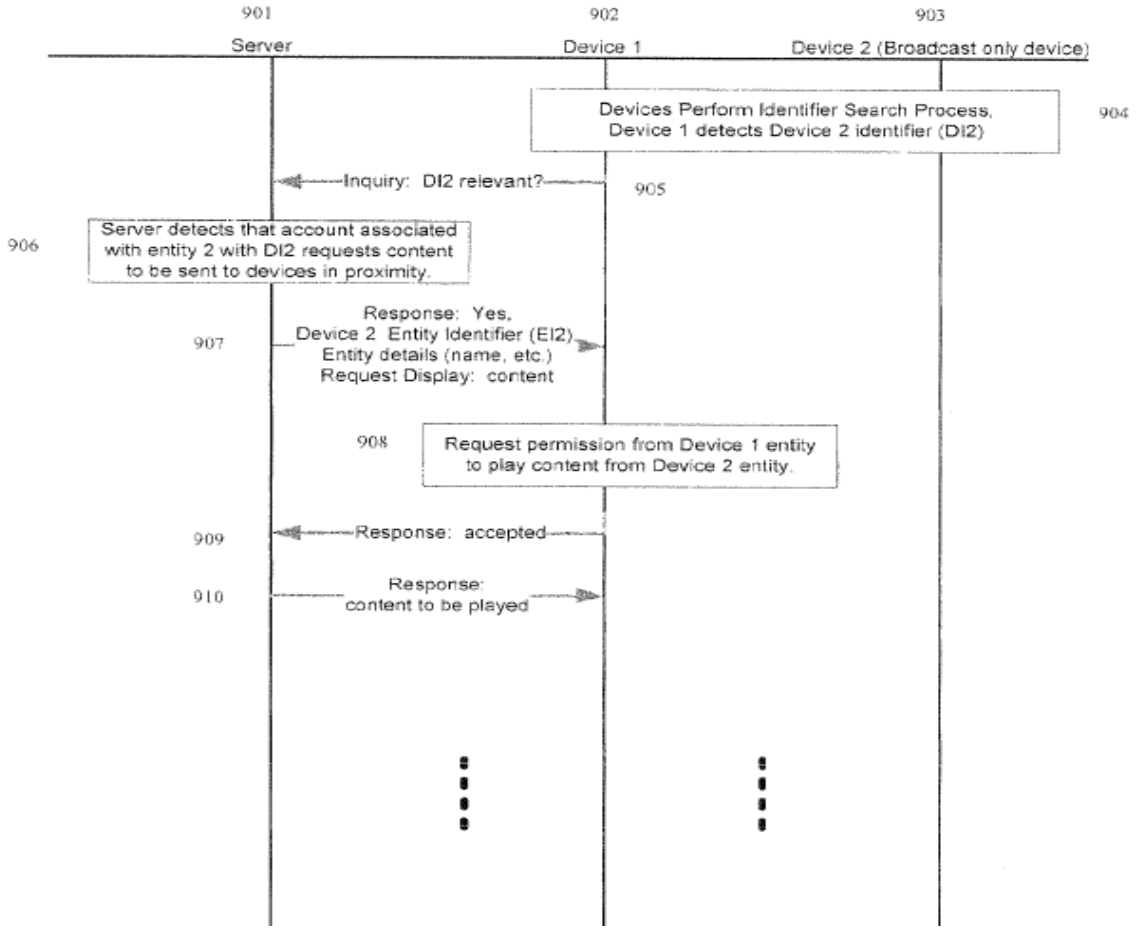

Figure 9 of the '913 Patent

Figure 9 illustrates an example of a grocery store application 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. 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 the customer device (Device 1). 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 response message 907 indicating the presence of the detected device and the content available. *Id.* at 14:56–58. Customer device 902 requests input from the entity associated with server 901 for permission to download the coupon and other available content. *Id.* at 14:58–65. Message 909 from customer Device 1 accepting the content is sent to server 901 and response message 910 begins content delivery. *Id.*

III. ILLUSTRATIVE CLAIM

Illustrative claim 1 is reproduced below using the paragraph designations employed in the Petition.

> 1 [pre]. A method for operating a first wireless communication device comprising:
>
> [a] a first receiving step of receiving a first unique identifier from a second wireless device using a peer-to-peer protocol over a short range wireless communication link;
>
> [b] connecting to a server over a second communication link using a protocol different from the peer-to-peer protocol used on the short range wireless communication link;
>
> [c] sending the first unique identifier to the server over the second communication link;
>
> [d] receiving further information from the server over the second communication link;
>
> [e] the further information related to an entity or object associated with the second wireless device, the further information depending upon information parameters for a service account associated with the first unique identifier;

> [f] a second receiving step of receiving a second unique identifier from one of the second wireless device and a third wireless device using the peer-to-peer protocol over the short range wireless communication link, wherein the first unique identifier received in the first receiving step and the second unique identifier received in the second receiving step are not the same; and
>
> [g] comparing the first unique identifier received in the first receiving step and (b) said further information with (c) the second unique identifier received in the second receiving step, and as a result of such comparing, suppressing, in response to the second receiving step, a subsequent sending of the second unique identifier received in the second receiving step to the server over the second communication link.

Ex. 1001, 23:20–46.

IV. GROUNDS OF INSTITUTION

We instituted trial on the following grounds asserted in the Petition:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	102[1]	Mgrdechian[2]
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian, Kaplan[3]
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian, Gujar[4]

[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 '913 patent issued was filed before this date, the pre-AIA versions of §§ 102 and 103 apply.

[2] U.S. Patent No. 7,545,784, issued Jun. 9, 2009 (Ex. 1005).

[3] U.S. Patent No. 8,295,819, issued Oct. 23, 2012 (Ex. 1024).

[4] U.S. Patent No. 6,446,208, issued Sep. 3, 2002 (Ex. 1014).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian, Kaplan, Gujar
2, 8	103	Mgrdechian, Kulakowski[5]
2, 8	103	Mgrdechian, Kaplan, Kulakowski
2, 8	103	Mgrdechian, Gujar, Kulakowski
2, 8	103	Mgrdechian, Kaplan, Gujar, Kulakowski

V. ANALYSIS OF PRIOR ART CHALLENGES

A. Introduction

"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 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 burden of proof in *inter partes* review).

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,

[5] International App. No. WO 2007/084973, published Jul. 26, 2007 (Ex. 1013).

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." (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991)) (emphasis omitted) (second and third alteration in original)).

Additionally, under 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); *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349–50 (Fed. Cir. 2002).

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) objective evidence of nonobviousness. *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 Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–21 (2007)).

Before determining whether a claim is 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 consideration of obviousness has been presented 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 unpatentability of the challenged claims by a preponderance of the evidence.

B. Claims 1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39 as Anticipated by or Obvious Over Mgrdechian (Grounds 1 and 2)

As Petitioner challenges claims 1–4, 6–10, 12, 15, 17, 19, 21, 32–34, and 39 as anticipated by or obvious over the same reference, we address both challenges together.

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), the server generates 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, has 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 also 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 d1 (one hop

from the target to an out of range device) or by taking the devices in series a further distance, e.g., d2 (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 sends the IDs of Devices B and E to the remote server, causing the remote server to return profile information for Devices B and E to Device A. *Id.* 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. Claim 1

The Petition identifies as the preamble of claim 1 the recitation "[a] method for operating a first wireless communication device." Ex. 1001, 23:20–21. Patent Owner does not dispute Petitioner's contention that Mgrdechian discloses a wireless communication system for exchanging information between wireless devices. Pet. 26–29 (citing Ex. 1005, 1:32–35, 9:40–55, 9:65–10:5, Fig. 3A; Ex. 1003, Williams Decl. ¶¶ 96–97). As discussed below, as to claim 1, the Patent Owner Response explicitly disputes only whether Mgrdechian discloses claim limitation [1.g]. *See* PO

Resp. 22–28. Based on the evidence and arguments of record, we are persuaded Petitioner has demonstrated that Mgrdechian discloses a method of operating a first wireless communication device, as recited in the preamble of claim 1.

a) Claim Limitation [1.a]

The Petition identifies as claim limitation [1.a] the recitation "a first receiving step of receiving a first unique identifier from a second wireless device using a peer-to-peer protocol over a short range wireless communication link." Pet. 29. In support of its contention that Mgrdechian discloses this limitation, Petitioner cites Mgrdechian's disclosure that each wireless device intermittently or continuously broadcasts its unique ID over a local protocol, e.g., broadcasting a Bluetooth ID using a Bluetooth protocol, that can be detected by other devices within range. *Id.* at 19–20, 29–30 (citing Ex. 1005, 6:59–61, 10:10–15, 13:3–18, 19:34–39, 16:16–19, 20:1–47, Figs. 3A, 10; Ex. 1003, Williams Decl. ¶¶ 98–100). The Patent Owner Response does not address Petitioner's contentions concerning claim limitation [1.a] specifically.

Based on the evidence and arguments of record, we find that Petitioner has demonstrated Mgrdechian discloses claim limitation [1.a].

b) Claim Limitation [1.b]

The Petition identifies as claim limitation [1.b] the recitation "connecting to a server over a second communication link using a protocol different from the peer-to-peer protocol used on the short range wireless communication link." Pet. 32. In support of its contention that Mgrdechian discloses this limitation, Petitioner cites Mgrdechian's disclosure that a wireless device, e.g. the initiating device or Device A, communicates with a remote computer or server over a communication link using a second

protocol, such as a wireless phone network and the Internet, that is different from the peer-to-peer protocol used on the short range wireless communication link. *Id.* at 19–20, 32–33 (citing Ex. 1005, 10:48–56, 13:18–23, 23:3–12, Fig. 3A; Ex. 1003, Williams Decl. ¶¶ 101–103). The Patent Owner Response does not address Petitioner's contentions concerning claim limitation [1.b] specifically

Based on the evidence and arguments of record, we find that Petitioner has demonstrated Mgrdechian discloses claim limitation [1.b].

c) Claim Limitation [1.c]

The Petition identifies as claim limitation [1.c] the recitation "sending the first unique identifier to the server over the second communication link." Pet. 33. In support of its contention that Mgrdechian discloses this limitation, Petitioner cites Mgrdechian's disclosure that Device A (the initiating device) receiving Device B's ID on the short range peer-to peer network sends Device B's ID to the remote computer or server over the wireless phone network and Internet. *Id.* (citing Ex. 1005, 10:48–56, 20:1–47; Ex. 1003, Williams Decl. ¶¶ 104–105). The Patent Owner Response does not address Petitioner's contentions concerning claim limitation [1.c] specifically.

Based on the evidence and arguments of record, we find that Petitioner has demonstrated that Mgrdechian discloses claim limitation [1.c].

d) Claim Limitation [1.d]

The Petition identifies as claim limitation [1.d] the recitation "receiving further information from the server over the second communication link." Pet. 34. In support of its contention that Mgrdechian discloses this limitation, Petitioner cites Mgrdechian's disclosure that the computer system or server sends all or some profile information associated

with each device back to the initiating wireless device, e.g., Device A. *Id.* (citing Ex. 1005, 12:18–26). Petitioner notes that the profile may contain a list of friends using their identifiers. *Id.* at 21 (citing Ex. 1005, 5:31–35, 8:5–14, 11:34–52; Ex. 1003, Williams Decl. ¶¶ 81–82). Petitioner further notes that Mgrdechian's remote server can maintain a positional database, can use the IDs of the devices it receives from the initiating device to determine that other devices are in range of the devices corresponding to the received IDs, and return profile information concerning those other devices to the initiating device. *Id.* at 34–35 (citing Ex. 1005, 20:1–47, Fig. 10; Ex. 1003, Williams Decl. ¶¶ 106–108). Other than its reference to returning all or some of the profile information associated with each device ID back to the initiating device (Ex. 1005, 12:18–31), Petitioner does not cite disclosure in Mgrdechian that explicitly describes the remote server returning device IDs to the initiating device. *See* Pet. 34–35. Petitioner notes, however, that for profile information concerning friends or devices that are out of range of the initiating device, but are within the range of target devices, it would have been obvious to include the identifier of the friend or out of range device to facilitate communication. *Id.* at 21. The Patent Owner Response does not address Petitioner's contentions concerning claim limitation [1.d] specifically.

Based on the evidence and arguments of record, we find that, although Mgrdechian does not disclose claim limitation [1.d] explicitly for purposes of anticipation, Petitioner has demonstrated that Mgrdechian would have at least suggested claim limitation [1.d] to a person of ordinary skill in the art.[6]

[6] *See* Dec. to Inst. 10 (describing a person of ordinary skill in the art).

e) Claim Limitation [1.e]

The Petition identifies as claim limitation [1.e] the recitation "the further information related to an entity or object associated with the second wireless device, the further information depending upon information parameters for a service account associated with the first unique identifier." Pet. 35. In support of its contention that Mgrdechian discloses this limitation, Petitioner cites Mgrdechian's disclosure that the profile information the server returns for any device is filtered based on parameters associated with the ID of each target and the initiating device. *Id.* at 35–37 (citing Ex. 1005, 6:54–56, 14:61–65, 13:50–14:8, 16:60–17:10, Fig. 7A; Ex. 1003, Williams Decl. ¶¶ 109–112). The Patent Owner Response does not address Petitioner's contentions concerning claim limitation [1.e] specifically.

Based on the evidence and arguments of record, we find that Petitioner has demonstrated that Mgrdechian discloses claim limitation [1.e].

f) Claim Limitation [1.f]

The Petition identifies as claim limitation [1.f] the recitation "a second receiving step of receiving a second unique identifier from one of the second wireless device and a third wireless device using the peer-to-peer protocol over the short range wireless communication link, wherein the first unique identifier received in the first receiving step and the second unique identifier received in the second receiving step are not the same." Pet. 37. In support of its contention that Mgrdechian discloses this limitation, Petitioner cites Mgrdechian's disclosure that, using a local peer-to-peer wireless protocol, a wireless device detects other devices that come within its range and devices that move out of its range become undetectable. *Id.* at 23, 37 (citing Ex. 1005, 9:65–10:5). For example, where in the first receiving step Device A

detects a Device B (having a first unique identifier), and a third device, i.e., Device C with its own unique ID (a second unique identifier different from the first unique identifier), comes within range of Device A, in a second receiving step Device A detects Device C and receives a unique identifier transmitted from Device C over the peer-to-peer short range communications link. *Id.* at 37–39 (citing Ex. 1005, 10:38–47, 16:16–19, 19:34–39, 20:1–47, Figs. 3A, 3B, 10; Ex. 1003, Williams Decl. ¶¶ 113–116). The Patent Owner Response does not address Petitioner's contentions concerning claim limitation [1.f] specifically.

Based on the evidence and arguments of record, we find Petitioner has demonstrated Mgrdechian discloses claim limitation [1.f].

g) Claim Limitation [1.g]

The Petition identifies as claim limitation [1.g] the recitation "comparing the first unique identifier received in the first receiving step and (b) said further information with (c) the second unique identifier received in the second receiving step, and as a result of such comparing, suppressing, in response to the second receiving step, a subsequent sending of the second unique identifier received in the second receiving step to the server over the second communication link." Pet. 39. In support of its contention that Mgrdechian discloses this limitation, Petitioner notes that Device A may contain profile information for multiple devices, e.g. Devices B and C; when one of the devices, e.g. Device C, goes out of range and subsequently comes within range, Device A receives the ID from Device C and because Device C's profile is already stored in Device A, Device A does not transmit a second request for profile information to the server. *Id.* at 23–24, 39–40 (citing Ex. 1005, 8:5–14, 12:18–26, 15:44–16:2, 20:1–47, 20:56–21:8, Fig. 11; Ex. 1003, Williams Decl. ¶¶ 117–120).

Patent Owner argues that "[t]he challenged claims require, inter alia, that the first wireless device compare specific pieces of information that it has received during other steps of the claim, and as a result of that comparison, suppressing a transmission to the server. Mgrdechian does not teach or suggest this claimed comparison and suppression." PO Resp. 1. Patent Owner cites the Decision to Institute as noting that Mgrdechian does not explicitly state the initiating device suppresses transmission of a profile request to the remote server based on a comparison of device IDs, but states that Mgrdechian discloses the initiating device can search its saved profiles and use the profile information to decide whether to communicate messages directly to another device on a peer-to-peer basis. PO Resp. 23 (citing Dec. to Inst. 32). Patent Owner argues that claim limitation [1.g] "is about suppressing a subsequent sending of the second unique identifier ***to the server***, not to 'other devices on a peer-to-peer basis.'" *Id*. at 23. According to Patent Owner,

> the inquiry should focus on what Mgrdechian would have taught a POSITA about suppressing the sending of device IDs discovered via a short range wireless communications to the remote computing system. That is, the correct inquiry should not focus on whether the user of a device simply chooses to later send peer-to-peer messages to users based upon profile information it stores in memory.

Id. at 24. According to Patent Owner, the cited passage of Mgrdechian

> teaches that the remote computing system sends "some or all" of the requested profile information from the remote computing system back to an initiating wireless device, but nothing about the initiating wireless device's ability to "compar[e] the first unique identifier . . . and . . . further information with . . [a] second unique identifier . . . , and as a result of such comparing, suppressing, . . . a subsequent sending of the second unique identifier . . . to the server over the second communication link."

Id. (second and third alterations in original).

Patent Owner further contends that Mgrdechian does not teach any comparison of identifiers or profiles to determine which identifiers should be suppressed, but rather teaches the wireless device, e.g., Device A, simply requesting the complete profiles from whomever the user manually selects from the list. *Id.* at 25–26. Patent Owner further argues that Mgrdechian's "Portable Profile" embodiment discloses merely presenting the user of Device A with a list of target devices from which User A can select ones of interest. *Id.* According to Patent Owner, Mgrdechian teaches away from claim limitation [1.g] because Mgrdechian expressly discourages automatically forwarding device IDs to the remote computing system, as opposed to the claimed comparison and suppression. *Id.* at 26–27.

Petitioner argues "[a]s the Board recognized, Mgrdechian teaches that when an initiating device detects another device and if contacting the other device is desired, it can search its saved profiles and determine whether direct communication is possible, or whether a message to the server is necessary." Pet. Reply 3 (citing Dec. to Inst. 32); *see also* Ex. 1005, 5:31–35, 12:18–44, 20:56–21:8; Pet. 25, 55; Ex. 1003, Williams Decl. ¶¶ 87, 166. According to Petitioner, Patent Owner's argument that the passages cited by the Board teach nothing about suppressing the sending of received device IDs to the server based on a comparison of received device IDs with locally saved profile information is incorrect for two reasons. Pet. Reply 3. First, noting that Mgrdechian teaches the server sends some or all profile information for targets to the initiating device based on its request, Petitioner contends that Patent Owner ignores that Mgrdechian "further teaches that the initiating device may save '[s]ome or all of the profile information' sent by the server and that '[s]uch profile information may be useful if the

initiating user desires to contact such target at a later time,' for example, by 'sending a . . . pre-constructed message.'" *Id.* (alterations in original) (citing Ex. 1005, 12:18–44). Second, in response to Patent Owner's assertion that Mgrdechian at column 20, line 56 through column 21, line 8 merely teaches displaying a list of profiles to the user so that the user can select a profile to be viewed completely, Petitioner argues that Patent Owner ignores the same text of Mgrdechian teaches "scan[ning] for profiles in the vicinity" as well as "search[ing] for saved profiles." *Id.* at 4 (alterations in original). Thus, "as the Petition explains, the cited passages of Mgrdechian teach that the initiating device may directly contact a target user without sending the target device ID to the server if the initiating device finds that the target user's contact information is already saved locally." *Id.* In response to Patent Owner's arguments concerning Mgrdechian's Portable Profile and teaching away, Petitioner contends that (i) the Portable Profile is an additional functionality, not a separate embodiment, (ii) that the Petition cites to the Portable Profile to demonstrate Mgrdechian's goal of saving computing resources by narrowing the list of profiles to be retrieved, (iii) that Patent Owner incorrectly suggests Mgrdechian expressly discourages retrieving profile information from the server, because Mgrdechian merely conserves computer resources by not retrieving profile information for all devices within range. *Id.* at 5–6.

Patent Owner in turn argues that the cited portion of Mgrdechian does not relate to the claimed comparison and suppression and that Petitioner mistakenly implies that profile information returned from the server includes device IDs for those users and later messaging between the users indicates the presence of those device IDs. PO Sur-reply 3. According to Patent Owner, "Mgrdechian teaches a wealth of options for messaging that do not

necessitate that the server returned device IDs as part of the profile information that may be saved and do not require or relate to the claimed comparisons and suppressions." *Id*. at 4 (citing Ex. 1005, 18:5–12). Patent Owner also argues that Petitioner's arguments concerning claim 1 are inconsistent with its arguments concerning claims 2 and 8 as detailed in Patent Owner's discussion of clams 2 and 8. PO Resp. 27–28. We address claims 2 and 8 separately below. *See* Section V.B.4.

We agree with Petitioner. Mgrdechian discloses that (i) if a remote server sends Device B's friend information to Device A or (ii) if using a positional database, the remote server transmits to the initiating device profile information for devices other than those corresponding to the IDs transmitted to the remote server by the initiating device, then the initiating device saves some or all of the profile information concerning those other devices. Ex. 1005, 5:31–35, 8:5–14, and 11:34– 52; Ex. 1003, Williams Decl. ¶¶ 81–82; Pet. 34–35 (citing Ex. 1005, 20:1–47, Fig. 10; Ex. 1003, Williams Decl. ¶¶ 106–108). The profile information includes device IDs because Mgrdechian explicitly discloses that as devices come into each other's range, they recognize each other by transmitting and receiving device IDs over a local peer-to-peer short range communications link. Ex. 1005, 15:55–16:2, 19:43–57; *see also id.* at 22:36–23:2 (discussing wireless ID tags). Although Mgrdechian does not refer to "suppressing" sending of the second user ID to the server, the result described by Mgrdechian is the same. For example, Mgrdechian discloses that Device A may contain profile information for multiple devices, e.g. Devices B and C. When one of the devices, e.g. Device C, goes out of range and subsequently comes within range, Device A receives the ID from Device C. Because Device C's profile is already stored in Device A, Device A does not transmit a second request

for Device C's profile information to the server. That is, Device A suppresses sending Device C's user ID to the server. *See* Ex. 1005, 8:5–14, 12:18–26, 15:44–16:2, 20:1–47, 20:56–21:8, Fig. 11; Ex. 1003, Williams Decl. ¶¶ 117–120.

Having reviewed the evidence and arguments of record, we find that Mgrdechian would have disclosed or suggested claim limitation [1.g] to a person of ordinary skill in the art.

h) Conclusion as to Claim 1

Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian would have disclosed or suggested to a person of ordinary skill all the limitations of claim 1 for purposes of obviousness under 35 U.S.C. § 103.

3. Independent claim 7

Claim 7 is an apparatus claim drawn to "[a] first wireless communication device" and recites limitations similar to those of claim 1. Ex. 1001, 24:1–2. Petitioner cites its discussion of the preamble of method claim 1 as support for its assertion that Mgrdechian discloses a first wireless device. Pet. 44–45 (citing Ex. 1003, Williams Decl. ¶¶ 132–133). In addition to citing its discussion of claim limitation [1.a], Petitioner asserts that Mgrdechian discloses each wireless device includes a Bluetooth receiver for receiving RF signals from other wireless devices according to the Bluetooth protocol, as recited in claim limitation [7.a]. Pet. 45–46. As to the "second receiver and transmitter . . . communicating over a second communication link using a protocol different from the peer-to-peer protocol on the short range wireless communication link" recited in claim limitation [7.b], in addition to its discussion of claim limitation [1.b] Petitioner notes

that Mgrdechian discloses that RF circuitry in Device A implements "wireless phone technology," enabling the antenna and RF circuitry to function as a cellular network receiver and transmitter to communicate with the server. Pet. 46 (citing Ex. 1005, 21:65–22:12, Figs. 8, 13). As to claim limitations [7.c] and [7.d], which recite that the transmitter and receiver are used to "send the first unique wireless identifier to the server . . . [and] receive further information from the server over a second communication link," Petitioner cites its discussion of claim limitations [1.c] and [1.d]. Pet. 47–48. As to the further information being "related to an entity or object associated with the second wireless device" and "depending upon information parameters for a service account associated with the second wireless device," as recited in claim limitation [7.e], Petitioner cites its discussion of claim limitation [1.d] and notes that Mgrdechian discloses the profile information stored on the server is associated with Device B's identifier, and consequently, with Device B. Pet. 48 (citing Ex. 1003, Williams Decl. ¶¶ 144–145). Claim limitation [7.f] recites "the first receiver receiving a second unique identifier from one of the second wireless device and a third wireless device using the peer-to peer protocol over the short range wireless communication link." In asserting that Mgrdechian discloses this limitation, Petitioner cites its discussion of claim limitation [1.f]. Pet. 48–49 (citing Ex. 1003, Williams Decl. ¶¶ 146–147). As to Mgrdechian's disclosure of the comparison steps recited in claim limitation [7.g], Petitioner cites its discussion of claim limitation [1.g]. Pet. 49. Petitioner further states that Mgrdechian discloses that Device A includes a processor for processing and controlling information that performs the comparison step. *Id.* (Citing Ex. 1005, 21:65–22:26, Fig. 13).

Noting that the only additional evidence Petitioner cites for claim limitation [7g] relates to Device A including a processor, Patent Owner relies on the same arguments it advanced in response to Petitioner's challenge to claim limitation [1.g]. PO Resp. 28. For the same reasons we found Petitioner's arguments concerning claim limitation [1.g] persuasive, we find those same arguments persuasive as to claim limitation [7.g].

4. Claims 2 and 8

Claims 2 and 8 depend from claims 1 and 7, respectively. Claim 2 recites "the step of detecting further information from the server is not performed if the server determines that a unique identifier for the second wireless device is not current." Ex. 1001, 23:47–50. Similarly, claim 8 recites "the second receiver does not receive further information from the server if the server determines that a unique identifier for the second wireless device is not current." *Id.* at 24:25–28. Petitioner cites Mgrdechian as disclosing that wireless device IDs are updated periodically (e.g., dynamically or pseudo-randomly) and argues that a person of ordinary skill would have understood that the server does not return profile information for Device B to an initiating device if the ID provided by the initiating device does not match the updated identifier for Device B. Pet. 42 (citing Ex. 1005, 5:1–3, 11:55–58; Ex. 1003, Williams Decl. ¶¶ 121–123).

According to Patent Owner, Mgrdechian teaches a simple matching operation, i.e., Mgrdechian teaches checking to see if the ID is in the system. PO Resp. 30; PO Sur-reply 7. For example, if the remote computing system receives from Device A an ID, e.g., the ID of Device B, and there is a match, the remote computer sends Device B's information, but if there is no match no information is sent. *Id.* Patent Owner contends Mgrdechian is distinguished from challenged claims 2 and 8, which require the server to

determine that a unique identifier for the second wireless device is not current. PO Resp. 30; PO Sur-reply 8. Patent Owner acknowledges that Mgrdechian mentions embodiments of the device can include cases where the IDs are static, dynamic, or pseudo-random, but argues that a person of ordinary skill would have understood this text to mean only that the IDs could be assigned or generated that way and would not change over time because the server would not recognize new IDs. PO Resp. 30–31; PO Sur-reply 9–10.

Petitioner notes that claims 2 and 8 do not require that the server determine whether the received ID was previously assigned. Pet. Reply 8–9. Petitioner disputes Patent Owner's contention that a person of ordinary skill would have understood Mgrdechian's reference to IDs that are static, dynamic, or pseudo-random to refer to the time when the IDs are assigned. PO Resp. 8–10 (citing Ex. 1003, Williams Decl. ¶¶ 88, 123).

Patent Owner's argument that no match would occur when comparing a new device ID acknowledges that the ID does match and will always match if the ID is "static" and will continue to match until it is changed at a later time, i.e., when the ID is "dynamic" or "pseudo-random." We agree with Petitioner that Mgrdechian's server would be able to match periodically updated device IDs with the device IDs received from initiating devices as long as the time between device ID updates is longer than the time between successive broadcast of device IDs and that this would allow users to discover information about each other for a limited amount of time, e.g., during a shop visit or a party, without compromising privacy indefinitely. Pet. Reply 10. We also agree with Petitioner that, e.g., as a security measure, "it would have been obvious to change a dynamic identifier to a new identifier periodically so that old identifiers would no longer provide

access to profile information on the server." Pet. Reply 10 (citing Ex. 1003, Williams Decl. ¶¶ 88, 123; Pet. 25).

Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian would have disclosed or suggested the limitations of claims 2 and 8 to a person of ordinary skill.

5. Claims 3 and 9

Claims 3 and 9 depend from claims 1 and 7, respectively, and recite "the second communication link is provided by a wide area wireless network selected from the group consisting of CDMA (IS-2000), GSM, W-CDMA, WiMax, and UMTS." Ex. 1001, 23:51–54, 24:29–32. In addition to referring back to its discussion of claim limitation [1.b], Petitioner cites Mgrdechian as disclosing that the wireless phone network may be a CDMA or GSM wide area network. Pet. 43 (citing Ex. 1005, 10:48–56, 22:3–12; Ex. 1003, Williams Decl. ¶¶ 124–126).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claims 3 and 9. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claims 3 and 9.

6. Claims 4 and 10

Claims 4 and 10 depend from claims 1 and 7, respectively, and recite "wherein the short range wireless communication link is selected from the group consisting of Bluetooth, RFID, Wi-Fi, 802.11 based and Ultra-Wide-Band (UWB)." Ex. 1001, 23:55–58, 24:34–36. In addition to its discussion of claim limitation [1.a], Petitioner cites Mgrdechian as disclosing the local wireless protocol is an 802.11 protocol or Bluetooth. Pet. 43 (citing *id.* at 29–32; Ex. 1005, 10:10–15; Ex. 1003, Williams Decl. ¶¶ 127–128).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claims 4 and 10. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claims 4 and 10.

7. Claims 6 and 12

Claims 6 and 12 depend from claims 1 and 7, respectively, and recite "the further information relates to an e-commerce transaction between an entity associated with the first wireless device and another entity associated with the second wireless device." Ex. 1001, 23:64–67, 24:41–44. In addition to its discussion of claim limitation [1.d], Petitioner cites Mgrdechian as disclosing its system is used for electronic commerce applications including micropayments between wireless devices. Pet. 44 (citing Ex. 1005, 15:11–15; Ex. 1003, Williams Decl. ¶¶ 129–131). Petitioner notes that Device B's profile returned to Device A includes items or services for sale by the user of Device B, that are then purchased using a micropayment sent from Device A to Device B through the server. *Id.*

Patent Owner contends that Mgrdechian cursorily and at a high level mentions the use of the service or hardware for electronic commerce applications including micropayments, but does not show how such micropayments are to be effectuated and does not teach the scenario relied upon by Petitioner. PO Resp. 32–33 (citing Ex. 1005, 7:43–50, 15:11–15, 21:6–8; Ex. 2010, Foley Decl. ¶ 57). Patent Owner further contends that the "further information" of claim 6 is the further information that must be used in claim limitation [1.g], but that Petitioner fails to explain how its e-commerce theory fits in with the comparison of this "further information" with the first and second unique identifiers or why that comparison would result in the claimed suppression step. PO Resp. 33; PO Sur-reply 12–13.

Petitioner argues that Mgrdechian teaches a user's profile may include items or services for sale and that another user may make micropayments. Pet. Reply 11–12 (citing Ex. 1005, 11:28–33, 15:11–15, 21:6–8). According to Petitioner, "[b]ecause Mgrdechian teaches detailed messaging embodiments and teaches that each of those messaging embodiments may be used for 'micropayments' as part of an e-commerce transaction, Mgrdechian teaches sending messages with micropayments." *Id.* at 12 (citing Ex. 1005, 15:11–15). As to "further information" Petitioner argues that the further information is profile information associated with devices, including items and services for sale that may be purchased with a micropayment. *Id.*

Claims 6 and 12 recite only that the further information relates to an e-commerce transaction between entities associated with the first and second wireless devices. Claims 6 and 12 do not further define or limit how the further information is related to an e-commerce transaction. The subject matter cited by Petitioner demonstrates that Mgrdechian sufficiently links the further information with an e-commerce transaction between the entities associated with the first and second wireless devices.

Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses, or at least suggests, to a person of ordinary skill the limitation of claims 6 and 12.

8. Claim 15

Claim 15 depends from claim 1 and recites "a further action comprises: displaying on a display of the first wireless device, at least a portion of stored further information, the stored further information having been previously determined as a result of previous detections of the first unique identifier." Ex. 1001, 24:57–62. In addition to its discussion of

claim limitation [1.d], Petitioner cites Mgrdechian as disclosing that Device A "store[s] internally" profile information received from the server for Devices B and C and subsequently displays the "saved profiles" when desired by the user of Device A. Pet. 52 (citing Ex. 1005, 12:18–26, 20:56–21:8, Fig. 11) (alteration in original).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 15. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 15.

9. Claim 17

Claim 17 depends from claim 15 and recites "the step of receiving further information from the server is not performed if the server determines that an additional unique identifier associated with a user of the first wireless device is not authorized to receive the information." Ex. 1001, 25:7–11. Petitioner notes that Mgrdechian teaches device IDs 813 and 823 are unique identifications. Pet. 53 (citing Ex. 1005, 16:16–19). In addition to its analysis of claim limitations [1.d] and [1.e], Petitioner cites Mgrdechian as disclosing using the device IDs of the target (Device B) and imitating device (Device A) to perform filtering, e.g. "[t]he server uses [D]evice B's ID to retrieve [D]evice B's 'filter parameters' and compares that information with [D]evice A's profile information, which is retrieved using its ID" and "[u]pon the server determining there is no match or that [D]evice A is denied access . . . [D]evice B's information is . . . not sent to [D]evice A." Pet. 53–54 (citing Ex. 1005, 13:50–14:8, 14:16–26, 14:42–45, 19:13–22; Ex. 1003, Williams Decl. ¶¶ 160–163).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 17. Having considered the evidence and arguments of

record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 17.

10. Claim 19

Claim 19 is a multiple dependent claim that depends from either claim 1 or independent claim 18 in the alternative. Claim 18, which is not challenged in this proceeding, includes the limitations of claim 1 and recites the additional limitations of (i) "displaying on a display of the first wireless device at least of portion of the further information" and, (ii) in the comparison step, in addition to suppressing subsequent sending of the unique identifier, "preventing the display of said portion of said further information." Ex. 1001, 25:12–38. Claim 19 recites the additional limitation that "the further information relates to the second unique identifier and is used to reduce the amount of additional information needed from the server to complete a predetermined next action." *Id.* at 25:39–42.

In addition to citing its analysis of the limitations of claim 1, Petitioner cites Mgrdechian as disclosing that saving Device C's profile received from the server on Device A reduces the amount of information required to complete a next determined action because it "removes the need to request the profile from the server when Device C comes within the range of Device A." Pet. 55 (citing Ex. 1005, 5:31–35). Petitioner further cites Mgrdechian's disclosure of sending a saved message by selecting from available pre-constructed messages. *Id.* (citing Ex. 1005, 12:18–37).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 19. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the

evidence that Mgrdechian discloses the limitations of claim 19 to the extent it depends from claim 1.[7]

11. Claim 21

Claim 21 is a multiple dependent claim that depends from independent claim 1 or independent claim 18 in the alternative and recites "the further information relates to the second unique identifier, and is used to reduce the amount of additional information needed from the server to complete a predetermined next action." Ex. 1001, 25:47–49. In addition to the arguments Petitioner advanced relative to claims 1 and 19, Petitioner cites Mgrdechian as disclosing a server sending to Device A profile information that includes identifiers for each device within one hop of Device B, such as Device C. Pet. 56 (citing Ex. 1005, 7:19–21, 8:5–14, 20:1–47). Petitioner further argues that consistent with Mgrdechian's goal to connect mutual friends, at a minimum it would have been obvious to include corresponding identifiers in the list of friends and profile information. *Id.* (citing Ex. 1005, 11:48–52; Ex. 1003, Williams Decl. ¶¶ 167–169).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 21. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 21 to the extent it depends from claim 1.

[7] Petitioner has not challenged claim 18 and does not present arguments concerning the subject matter of additional limitations recited in claim 18. We do not make any determination in this Decision of the patentability of multiple dependent claims 19 and 21 to the extent they depend alternatively from claim 18.

12. Claim 32

Claim 32 depends from claim 1 and recites "said step of receiving a specific unique identifier using a peer-to-peer protocol over a short range wireless communication link further comprising detecting the specific unique identifier from the second wireless device as a broadcast unique identifier, without establishing a two way connection between the first and second devices using the peer-to-peer protocol." Ex. 1001, 26:47–53. In addition to the arguments Petitioner advanced concerning claim limitation [1.a], Petitioner cites Mgrdechian as disclosing that Device B can operate in broadcast mode, such that it broadcasts its ID for detection by any device in the vicinity, e.g., Device A. Pet. 57 (citing Ex. 1005, 6:59–61; Ex. 1003, Williams Decl. ¶¶ 170–172).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 32. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 32.

13. Claim 33

Claim 33 depends from claim 32 and recites "said using a peer to peer protocol over a short range link further comprises: transporting said specific unique identifier from the second wireless device to the first wireless device without the use of any wired Connection." Ex. 1001, 26:54–58. In addition to the arguments Petitioner advanced concerning claim limitation [1.a], Petitioner cites Mgrdechian as disclosing Device A receives the ID of Device B via a local wireless protocol, such as Bluetooth. Pet. 57–58 (citing Ex. 1005, 10:10–15; Ex. 1003, Williams Decl. ¶¶ 173–174).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 32. Having considered the evidence and arguments of

record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 32.

14. Claim 34

Claim 34 depends from claim 15 and recites "an additional action includes: notifying the user of the first wireless device of proximity of the second wireless device or of proximity of the object or entity associated with the second device." Ex. 1001, 26:59–63. In addition to its analysis of claims 1 and 15, Petitioner notes Mgrdechian discloses that upon detection of the presence of Device B and the vicinity of Device A, Device A automatically queries other devices for their IDs, and if any of the profiles match the preferences of User A, an alert is sent to User A to indicate the presence of a person-of-interest. Pet. 58 (citing Ex. 1005, 6:44–50, 15:1–10; Ex. 1003, Williams Decl. ¶¶ 175–177).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claims 34. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 34.

15. Claim 39

Claim 39 depends from claim 1 and recites "the first receiving step further comprises: [39.a] receiving visual identification information as part of the further information received from the server; [39.b] displaying the visual identification information on a display of the first wireless device; [39.c] receiving input from a user of the first wireless device confirming the displayed visual identification information matches an object or entity in proximity to the user of the first wireless device; and [39.d] sending a message to the server over the second wireless link indicating the confirmation." Ex. 1001, 27:25–28:9. As to limitations [39.a] and [39.b],

Petitioner cites Mgrdechian as disclosing that remote computer 360 may transmit profile information back to the initiating device and that once Device A has received images of the neighboring user from the server, the initiating device can display the images, and User A can scroll through the images to select the profile to view or the person with whom to communicate. Pet. 59–60 (citing Ex. 1005, 5:21–30, 11:57–64; Ex. 1003, Williams Decl. ¶¶ 180–184).

As to claim limitation [39.c], Petitioner cites Mgrdechian as disclosing that when in visual contact with another user, user A initiates a scan for nearby devices, e.g., Devices B and C, and, after receiving images of User B and/or User C in response to the scan, User A decides whether to contact users B and/or C. Pet. 60 (citing Ex. 1005, 5:21–30, 13:3–18). As to claim limitation [39.d], Petitioner cites Mgrdechian as disclosing that upon receiving the selection of images of User B and/or C, Device A uploads to request via the cellular network to the server enabling user A to receive more information and initiate communication with User B and/or User C. Pet. 61 (citing Ex. 1005, 5:21–30; Ex. 1003, Williams Decl. ¶¶ 188–190).

Patent Owner does not respond explicitly to Petitioner's contentions concerning claim 39. Having considered the evidence and arguments of record, we find that Petitioner has demonstrated by a preponderance of the evidence that Mgrdechian discloses the limitations of claim 39.

C. Claims 1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39 as Obvious Over Mgrdechian in View of Kaplan (Ground 3)

Petitioner argues that, to the extent Patent Owner contends additional disclosure of the comparing step in claim limitations 1.g and 7.g is required, this feature is disclosed by Kaplan. Pet. 61. Kaplan discloses

> a communication system that enables automated retrieval of caller ID picture information and association with contact information . . . . The communication system has a wireless device communicating with a picture server. The wireless device receives an incoming call with caller ID information, and determines if a picture is locally stored for the caller. If no picture is locally stored for the caller, then a request is made to retrieve a picture from the picture server. If the picture server has the requested picture, and the wireless device is authorized to receive the picture, then the picture is downloaded to the wireless device, where the picture is associated with contact information for the caller. The picture of the caller will then be automatically displayed when the caller places future calls.

Ex. 1024, 2:16–31. Petitioner cites Kaplan as disclosing a wireless device that compares ID information received from another wireless device to information that is "locally stored" in the device (as well at its associated ID) to determine whether there is any locally stored information, e.g., a picture, associated with the newly-received ID and whether that information needs to be requested from the server. Pet. 63–64 (citing Ex. 1024, 3:53–55, 3:58–4:8, 11:61–12:12, Figs. 1, 4). According to Petitioner, a person of ordinary skill

> would have been motivated to apply Kaplan's teaching to search for locally stored information associated with a received identifier before requesting the information from the server in implementing Mgrdechian's wireless device such that [D]evice A compares [D]evice C's identifier received from [D]evice C to the locally saved profile of [D]evice C as well at its identifier to advantageously save computing resources by requesting only profiles from the server not already saved to the device as taught by Mgrdechian.

Pet. 64 (citing Ex. 1005, 15:44–16:2; Ex. 1003, Williams Decl. ¶¶ 198–199) (emphasis omitted). Noting that Kaplan is in the same field as the subject matter of the '913 patent and is pertinent to the problem identified in the '913 patent as the lack of an independent third party to facilitate services

required for secure proximity based mobile electronic transaction, Petitioner contends that for a person of ordinary skill it would have been routine, straightforward, and advantageous to apply Kaplan's teaching of comparing received identifiers with locally stored identifiers in implementing Mgrdechian's search for saved profiles functionality. Pet. 62, 64 (citing Ex. 1003, Williams Decl. ¶ 200).

Noting that Kaplan concerns a wireless device receiving an unsolicited telephone call from someone that may or may not be in the wireless device's contact list, Patent Owner contends that a person of ordinary skill would not have looked to Kaplan to modify Mgrdechian in which the wireless device (Device A) solicits replies from adjacent devices and receives portable profile (picture) information in response to such solicitations. PO Resp. 36. According to Patent Owner, contrary to promoting automatic retrieval of pictures not already stored at the wireless device, Mgrdechian teaches away because it requires the user of Device A to be presented with a list of pictures to manually select to avoid automatic downloading of unwanted full profiles. *Id.*

Petitioner argues that it relies on Kaplan only for its teaching of a device processor comparing information received from another device to locally stored information to determine whether additional information from the server is needed. Pet. Reply 14–15. Petitioner emphasizes that "[a]s the Petition explains, a POSITA would have been motivated to apply Kaplan's teaching of searching for a newly received device ID in locally stored information, before requesting the information from the server in order to further Mgrdechian's goal of saving computing resources." *Id.* (citing Pet. 65, Ex. 1005 15:44–16:2, 20:56–31:6; Ex. 1003, Williams Decl. ¶199). Petitioner also argues there is no teaching away, as Mgrdechian does not

criticize, discredit or discourage investigation into the claimed invention. Pet. Reply 15.

The comparing step in claim limitation [1.g] recites "comparing the first unique identifier received in the first receiving step and (b) said further information with (c) the second unique identifier received in the second receiving step." As discussed above, we find that Mgrdechian discloses or suggest claim limitation [1.g] to a person of ordinary skill. *See* Section V.B.2.g. We further agree with Petitioner that taken in context, Petitioner has demonstrated that a person of ordinary skill would have had reason to combine Kaplan's teachings of comparing information received from another device to locally stored information to determine if further information from a server is necessary.

Having considered 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 Mgrdechian and Kaplan to arrive at claim limitation [1.g] (and, likewise, claim limitation [7.g]) and that Petitioner has shown by a preponderance of the evidence that the challenged claims are accordingly unpatentable over the combination of Mgrdechian and Kaplan.

D. Claims 1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39 as Obvious Over Mgrdechian in View of Gujar (Ground 4) and as Obvious Over Mgrdechian and Gujar in Further View of Kaplan (Ground 5)

Petitioner argues that, to the extent Patent Owner contends additional disclosure of the comparing step in claim limitations [1.g] and [7.g] is required, this feature is disclosed in Gujar. Pet. 65. Petitioner cites Gujar's disclosure of an electronic tag reader that compares a newly received unique identification number for an electronic tag with a previously received unique

identification number to determine whether they are the same, such that subsequent receptions of the same identifier within a pre-determined period of time can be marked as redundant and not transmitted to a server. Pet. 65–66 (citing Ex. 1014, 3:47–49, 7:44–47, 14:51–15:20, Figs. 6–7; Ex. 1003, Williams Decl. ¶¶ 201–202). Noting that Gujar relates to wireless communication between electronic tags and readers connected to a computer network that includes separate transmitter/receiver systems for a cellular network link and a short-range link (e.g., RFID), Petitioner contends that in implementing Mgrdechian's wireless devices, a person of ordinary skill would have been motivated to apply Gujar's teaching of comparing identifiers to suppress transmission of redundant identifier lookup requests to a server. *Id.* at 65–67 (citing Ex. 1003, Williams Decl. ¶¶ 201–203).

Patent Owner notes that Petitioner references an embodiment of Gujar in which a pen computer is augmented with a tag reader used with three electronic tags and in which a processor checks to ensure that a user's bringing an ID card to a reader has not triggered multiple events. PO Resp. 38. Patent Owner argues that in some circumstances in Mgrdechian, as in cases where Device A detects Device B at least two consecutive times, sending Device B's ID twice informs the remote computing system that Device B is still in the vicinity and not sending Device B's ID informs the remote computing system that Device B has left the vicinity. *Id.* According to Patent Owner, this phenomenon in Mgrdechian would be defeated by Gujar, where an accidental double tap of a user's card could result in the unwanted printing two copies of a document. *Id.* at 38–39. Thus, according to Patent Owner, "it cannot be fairly said that a POSITA would have looked to selectively modify the Mgrdechian system to implement the electronic 'double rap' tag prevention problem of Gujar." *Id.* at 39 (citing Ex. 2020,

Foley Decl. ¶ 69). Patent Owner further argues that Mgrdechian "solves this problem all by itself, that is, by presenting the user of Device A with a list of available adjacent users, and making the user of Device A select the specific profiles that she wants to review before the remote computing system downloads the full profiles onto Device A." *Id.* at 39–40.

Petitioner responds that Patent Owner incorrectly argues that suppressing sending redundant IDs as taught be Gujar would prevent Mgrdechian from determining proximity information between wireless devices. Pet. Reply 17. According to Petitioner, the existence of a tradeoff between conserving resources and providing the most up to date proximity information does not mean a person of ordinary skill would not have had reason to limit the number of transmissions during a predetermined time period to reduce queries. *Id.* In fact, according to Petitioner, a person of ordinary skill would have been motivated to apply Gujar's teaching to Mgrdechian because "Gujar's 'double rap' prevention scheme exists to suppress unnecessary transmission of redundant identifiers to the server—precisely the rationale explained in the Petition." Pet. Reply 18 (citing Pet. 66; Ex. 1003, Williams Decl. ¶ 203; Ex. 1014, 14:51–15:24).

We agree with Petitioner. Patent Owner's identification of a circumstance in which a tradeoff may exist in the combination of Mgrdechian and Gujar does not change the fact that, consistent with the goals of Mgrdechian, Gujar teaches an implementation that compares identifiers to suppress redundant transmissions.

Patent Owner argues that the further combination with Kaplan fails for the same reasons as the combination of Mgrdechian and Gujar. PO Resp. 40–41. As discussed above, we find that a person of ordinary skill would have had reason to combine Kaplan's teachings concerning

implementation of the comparing step in claim limitation [1.g]. We find that Gujar's teachings concerning the avoidance of redundant messaging are consistent with those of Mgrdechian and Kaplan and that a person of ordinary skill would have had reason to apply Gujar's teaching to Mgrdechian with the teachings of Kaplan. Accordingly, we are persuaded that Petitioner has shown by a preponderance of the evidence that the challenged claims (to the extent they depend directly or indirectly from independent claim 1) are unpatentable over the combination of Mgrdechian and Gujar, as well as over the combination of Mgrdechian, Gujar, and Kaplan.

E. Claims 2 and 8 as Obvious Over Mgrdechian in View of Kulakowski (Ground 6) in Further View of Kaplan (Ground 7), Gujar (Ground 8), or Kaplan and Gujar (Ground 9)

Petitioner argues that, to the extent Patent Owner contends that additional disclosure is required of "the server determines that a unique identifier for the second wireless device is not current," that feature is disclosed by Kulakowski. Pet. 69. Petitioner cites Kulakowski as providing additional implementation detail about how identifiers are changed and compared at the server with received identifiers. *Id*. As previously discussed, Petitioner cites Mgrdechian as disclosing that wireless device IDs are updated periodically (e.g., dynamically or pseudo-randomly) and argues that a person of ordinary skill would have understood that the server does not return profile information for Device B to an initiating device if the ID provided by the initiating device does not match the updated identifier for Device B. *Id.* at 42 (citing Ex. 1005, 5:1–3, 11:55–58; Ex. 1003, Williams Decl. ¶¶ 121–123); *see* Section V.B.4. Petitioner cites Kulakowski as disclosing the use of a "covert identifier" in a network security system to

detect clones that mimic a real client device. Pet. 69 (citing Ex. 1013 ¶¶ 2, 6, 8, 17, Figs. 1, 4). Petitioner notes that Kulakowski's covert identifier may remain fixed at a single value for some period of time and be updated periodically. *Id*. (citing Ex. 1013 ¶ 8, 47, 78, 95, Fig. 4). Petitioner argues a person of ordinary skill would have found it advantageous to apply Kulakowski's teaching of updating identifiers periodically and denying service to devices not using the updated identifier in implementing Mgrdechian's secure communication system using a dynamic device identifier, such that the server detects when the received identifier is not current, thereby improving security. Pet. 69–70 (citing Ex. 1003, Williams Decl. ¶¶ 213–215).

Patent Owner cites IPR2020-00978 as concluding that Petitioner failed to demonstrate why it would have been obvious to use Kulakowski's covert identifier teaching to enhance security in Mgrdechian by transmitting the covert identifier to another client device. PO Resp. 41–43 (citing Ex. 2018, 19–20). Patent Owner argues Petitioner's reliance on Kulakowski's covert identifier teachings in this proceeding also is flawed, as Petitioner's theory is based on a single vague phrase in Mgrdechian that provides no description of dynamic or pseudo-random embodiments. *Id.* at 43 (citing Ex. 1005, 5:1–3). Patent Owner further contends that Kulakowski's covert identifier differs from Mgrdechian's ID because Kulakowski does not teach a device may be identified based only on the covert identifier; instead, Kulakowski's covert identifier accompanies the identification information, so that the server may distinguish an authentic device from a cloned device. *Id.* at 44–46 (citing Ex. 1013 ¶ 88, "[t]he server then determines whether more than one response has been received with the same client identifier but different covert data (step 185)"(emphasis omitted)). Patent Owner further

contends that because Kulakowski addresses messages sent between a client and a server, not identifiers passed between client devices, as in Mgrdechian, Kulakowski does not contemplate an intermediate device, such as the first wireless device in the challenged claims, collects an identifier from another device and provides that identifier to a server. *Id.* at 46–47. According to Patent Owner broadcasting Kulakowski's covert identifier in a way that could be intercepted by other client devices would defeat Kulakowski's purpose and compromise the covert identifier. *Id.* at 47–48.

We are not persuaded by Petitioner's arguments, which rely on Kulakowski's teachings of using an updated "*covert* identifier" in order "to advantageously improve security by detecting cloned client devices." Pet. 69–70 (emphasis added). Kulakowski discloses a security method in which a device sends a message to a server, the message having embedded therein a covert identifier. Ex. 1013 ¶¶ 6, 37. The server extracts the covert identifier upon receiving the message and compares the extracted covert identifier with stored values corresponding to the client credentials to determine if the device is an authentic device or a cloned device. *Id.* ¶ 48. "The covert identifier is generated by operational events occurring during actual operation of a client device. . . . The covert data therefore provides a unique identifier for a particular client device which is stored by the client device and subsequently used in messages to a server." *Id.* ¶ 15. "Such values are covert because their nature makes them difficult for hackers to detect and duplicate in cloned client devices . . . ." *Id.* ¶ 34.

Thus, Kulakowski teaches that its "covert identifiers" are covert and provide added security because they are known only to the particular device and the server. Neither Petitioner nor Petitioner's declarant explains adequately why it would have been obvious to use this covert teaching to

enhance the security of Mgrdechian's system by transmitting the covert identifier to another client device. We agree with Patent Owner that, by transmitting the identifier to other devices, the modification proposed by Petitioner "creates the very risk Kulakowski is trying to prevent." PO Resp. 47. By transmitting this information to devices sending an identification request (*see, e.g.*, Ex. 1005, 10:38–47), the information would no longer be "covert," and the Petition does not explain adequately how this information would "improve security by detecting cloned client devices." *See* Pet. 69–70.

For the foregoing reasons, on this record, Petitioner has not shown, by a preponderance of the evidence, that claims 2 and 8 are unpatentable over the proposed combinations including Mgrdechian and Kulakowski.

VI. CONCLUSION[8]

Having considered all the evidence and arguments of record we conclude that Petitioner has demonstrated that claims 1–4, 6–10, 12, 15, 17, 19, 21, 32–34, and 39 are unpatentable as obvious under 35 U.S.C. § 103.

VII. ORDER

In consideration of the above it is:

[8] 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).

ORDERED that claims 1–4, 6–10, 12, 15, 17, 19 (as dependent from claim 1), 21 (as dependent from claim 1), 32–34, and 39 are unpatentable; and

FURTHER ORDERED that 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.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	102	Mgrdechian		1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian	1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian, Kaplan	1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian, Gujar	1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	
1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	103	Mgrdechian, , Kaplan, Gujar	1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	
2, 8	103	Mgrdechian, Kulakowski		2, 8
2, 8	103	Mgrdechian, Kaplan,		2, 8

		Kulakowski		
2, 8	103	Mgrdechian, Gujar, Kulakowski		2, 8
2, 8	103	Mgrdechian, Kaplan, Gujar, Kulakowski		2, 8
Overall Outcome	103		1–4, 6–10, 12, 15, 17, 19, 21, 32–34, 39	

FOR PETITIONER:

James L. Davis, Jr.
Cassandra Roth
ROPES & GRAY LLP
james.l.davis@ropesgray.com
cassandra.roth@ropesgray.com

FOR PATENT OWNER:

Lauren N. Robinson
Aaron R. Hand
BUNSOW DE MORY LLP
lrobinson@bdiplaw.com
ahand@bdiplaw.com