

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TARGET CORPORATION,  
Petitioner,

v.

PROXICOM WIRELESS, LLC,  
Patent Owner.

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IPR2020-00977  
Patent 8,369,842 B2

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

O'HANLON, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. Background

Target Corporation (“Petitioner”) filed a Petition for *inter partes* review of claims 1, 5, 9, 12–15, 22, and 24 (“the challenged claims”) of U.S. Patent No. 8,369,842 B2 (Ex. 1001, “the ’842 patent”). Paper 2 (“Pet.”), 1. Proxicom Wireless, LLC (“Patent Owner”) filed a Preliminary Response. Paper 9. On December 4, 2020, we instituted an *inter partes* review of the challenged claims on all grounds raised in the Petition. Paper 10 (“Institution Decision” or “Inst. Dec.”), 39.

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 19, “PO Resp.”), Petitioner filed a Reply to the Patent Owner Response (Paper 22, “Pet. Reply”), and Patent Owner filed a Sur-reply to Petitioner’s Reply (Paper 23, “PO Sur-reply”). An oral hearing was held on September 1, 2021. A transcript of the hearing has been entered into the record. Paper 29.

In our Scheduling Order, we notified the parties that “any arguments for patentability not raised in the [Patent Owner] response may be deemed waived.” *See* Paper 11, 10; *see also* Patent Trial and Appeal Board Consolidated Trial Practice Guide 66 (Nov. 2019) (“The patent owner response . . . should identify all the involved claims that are believed to be patentable and state the basis for that belief.”).<sup>1</sup>

For the reasons that follow, we conclude that Petitioner has proven by a preponderance of the evidence that claims 1, 5, 9, 12–15, 22, and 24 of the ’842 patent are unpatentable.

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<sup>1</sup> Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

## B. Real Parties in Interest

Petitioner identifies itself as the sole real party in interest. Pet. 5.

Patent Owner identifies itself as the sole real party in interest.

Paper 4, 2.

## C. Related Matters

The parties indicate that the '842 patent is the subject of the following district court proceeding:

*Proxicom Wireless, LLC v. Target Corporation*, No. 6:19-cv-1886 (M.D. Fla. filed Oct. 2, 2019) (“the District Court litigation”).<sup>2</sup>

Pet. 5; Paper 4, 2. The parties further note various petitions for *inter partes* review concerning separate patents, and Patent Owner identifies two pending patent applications. Pet. 5–6; Paper 4, 2–3.

## D. The Challenged Patent

The '842 patent disclosure “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 utilizing both a short range and a long range wireless capability.”

Ex. 1001, 2:55–59. The devices use a short range communication protocol, such as Bluetooth, only to detect the presence of other devices and use a long range communication protocol, such as Wi-Max, to communicate with a central server and to perform the actual substantive communications with

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<sup>2</sup> The identified proceeding was stayed on June 17, 2020, pending resolution of ten petitions for *inter partes* review filed by Petitioner. See Paper 6.

other devices. *Id.* at 6:35–48. Each device transmits identifier information via short range communication as a proximity detection process. *Id.* at 6:51–55. This use of peer-to-peer short range communication beneficially allows proximity between devices to be determined without the need of a global positioning system (GPS), which may not always be present or available for use. *Id.* at 3:57–64. Use of a central server to mediate communications between the devices beneficially provides security to the transaction, allows for anonymity between the parties, and implements policy enforcement. *Id.* at 4:14–62.

In one application, only a user’s device is capable of long range communication and the second device is only capable of broadcasting its identifier information. Ex. 1001, 7:22–31. This application is illustrated in Figure 2, which is reproduced below:

Figure 2

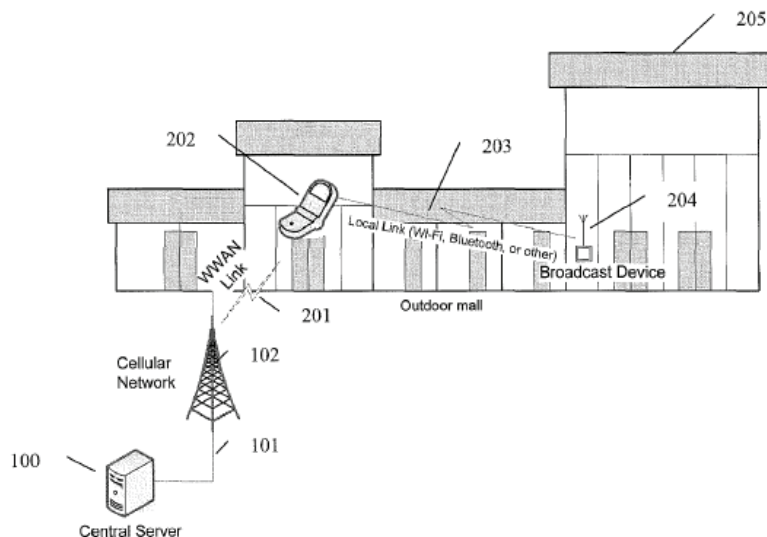


Figure 2 shows a block diagram of fixed broadcast device 204 and mobile device 202. *Id.* at 5:8–9. The user’s mobile device detects the broadcast

device and transmits the broadcast device's identifier information, along with a request for information regarding the broadcast device, to central server 100. *Id.* at 14:48–60. The server determines what information regarding the broadcast device is available and transmits a description of the information to the user's device. *Id.* at 14:61–63. The user then has the option to download the information. *Id.* at 14:63–15:3. The server may also coordinate the several steps of an electronic commerce transaction between the user's device and the broadcast device. *Id.* at 17:36–18:64.

#### E. The Challenged Claims

Petitioner challenges claims 1, 5, 9, 12–15, 22, and 24 of the '842 patent. Pet. 1. Claims 1 and 24 are independent. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method for facilitating a transaction between a first wireless device and a second wireless device utilizing a server, comprising the steps of:
  - communicating an identifier associated with said second wireless device to said first wireless device using a short range wireless connection, said first wireless device providing said identifier to said server, said server establishing location information associated with said first and said second wireless devices,
  - determining authentication information relating to said second wireless device or an entity associated with said second wireless device, transferring said authentication information between the server and the first wireless device and
  - said server providing authorization to said first wireless device or said second wireless device to proceed with said transaction based at least in part upon said identifier, said authentication information and the location information of said first and second wireless device.

Ex. 1001, 23:22–40.

F. Instituted Grounds of Unpatentability

The Petition relies on the following prior art references:

Name	Reference	Exhibit
Mgrdechian	US 7,545,784 B2, issued June 9, 2009	1005
Swartz	US 6,837,436 B2, issued Jan. 4, 2005	1007
Kulakowski	WO 2007/084973 A2, published July 26, 2007	1013

We instituted trial based on all asserted claims and grounds of unpatentability as follows:

Claim(s) Challenged	35 U.S.C. §	Reference(s)
1, 5, 9, 12, 14, 15, 22, 24	102(b) <sup>3</sup>	Mgrdechian
1, 5, 9, 12, 14, 15, 22, 24	103(a)	Mgrdechian
12–14	103(a)	Mgrdechian, Swartz
22	103(a)	Mgrdechian, Kulakowski

Pet. 12. Petitioner submits a declaration of Mr. David Hilliard Williams (Ex. 1003, “Williams Declaration”) in support of its contentions. Patent Owner submits a declaration of Michael Foley, Ph.D. (Ex. 2010, “Foley Declaration”) in support of its contentions.

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<sup>3</sup> The application resulting in the ’842 patent was filed prior to the date when the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011), took effect. Thus, we refer to the pre-AIA version of sections 102 and 103.

## II. ANALYSIS

### A. Principles of Law

To prevail in its challenge to Patent Owner's claims, Petitioner must demonstrate by a preponderance of the evidence that the claims challenged in the Petition are unpatentable. 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2018). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

“Under 35 U.S.C. § 102 a claim is anticipated ‘if each and every limitation is found either expressly or inherently in a single prior art reference.’” *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1274 (Fed. Cir. 2010) (quoting *Celeritas Techs. Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360 (Fed. Cir. 1998)). “Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.” *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time of the invention to a person having ordinary skill in the art. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) when in evidence, any

objective evidence of nonobviousness.<sup>4</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

### B. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art at the time of the invention (“POSITA”) would have had “a Bachelor’s degree in Electrical Engineering, or a related field, and approximately 3-5 years of professional experience in the field of wireless communications.” Pet. 17. Petitioner acknowledges that “graduate education could substitute for professional experience” and “significant experience in the field could substitute for formal education.” *Id.* (citing Ex. 1003 ¶¶ 8–20, 36–38).

Patent Owner concedes that the level of skill as defined by Petitioner “is sufficient for the Board to evaluate the Petition Grounds.” PO Resp. 16–17.

The level of ordinary skill in the art usually is evidenced by the references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978). The level of ordinary skill proposed by Petitioner appears to be consistent with that of the references, and we apply Petitioner’s proposed level of ordinary skill for purposes of this Decision.

### C. Claim Construction

In an *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil

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<sup>4</sup> The parties have not directed us to any such objective evidence.

action under 35 U.S.C. § 282(b), including construing the claims in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2019). Thus, we apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Claim terms are generally given their ordinary and customary meaning as would be understood by one with ordinary skill in the art in the context of the specification, the prosecution history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner contends that it “interprets the claim terms according to their plain and ordinary meaning consistent with the [S]pecification.” Pet. 18 (citing Ex. 1003 ¶¶ 22–24). Petitioner asserts that the challenged claims use “a term of degree (e.g., ‘short range wireless connection’),” but does not explain how this assertion affects claim construction. *Id.* Petitioner acknowledges that “[a] district court in another proceeding has construed terms in related patents,” but argues that those “constructions do not impact

the outcome of this IPR, because the prior art meets the claims under these constructions.” *Id.* (citing Ex. 1003 ¶ 67; Ex. 1021).

“Patent Owner does not propose any terms for construction . . . .” PO Resp. 15–16.

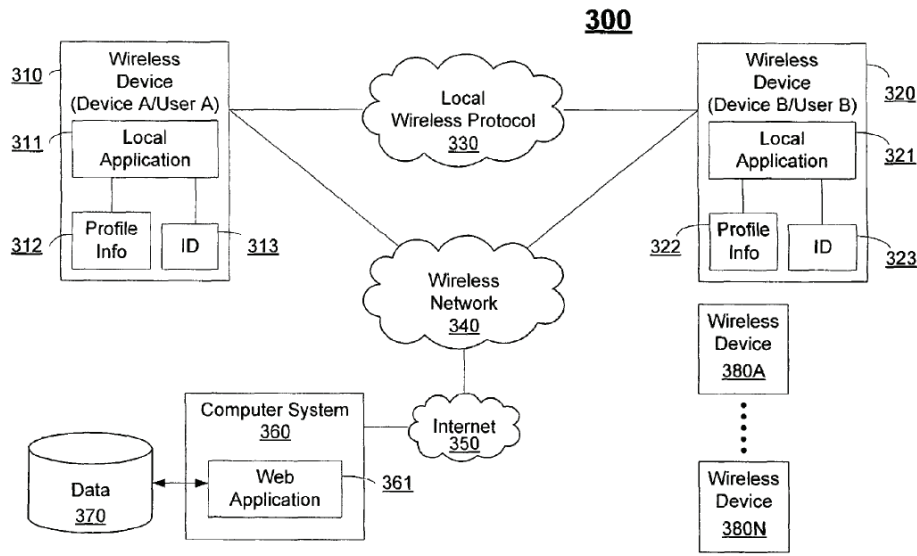
We determine that no express construction of any term is necessary. For purposes of this Decision, we apply the plain and ordinary meaning to the claim language.

#### D. Overview of the Asserted Prior Art

##### *1. Mgrdechian*

Mgrdechian discloses a wireless communication system. Ex. 1005, 1:32–35. Mgrdechian recognizes that on-line dating and social networking applications allow users to search for previously unknown parties based on specific qualities or characteristics, but contends that “there is no efficient methodology . . . where[by] a person may quickly obtain information about a specific individual that he or she may encounter but does not yet know anything about.” *Id.* at 2:43–57. Mgrdechian purports to overcome this problem by providing a wireless communication system. *Id.* at 3:6–9.

Figure 3A illustrates Mgrdechian’s system and is reproduced below:



**Fig. 3A**

Figure 3A illustrates Mgrdechian’s wireless communication system 300, showing wireless devices 310, 320 that communicate directly using local wireless protocol 330. Ex. 1005, 9:34–37. The system also includes remote computer system 360, which communicates with the wireless devices via wireless network 340 and Internet 350 and provides access to additional information regarding users of the wireless devices. *Id.* at 10:48–61.

Mgrdechian is particularly directed to a dating application (*see* Ex. 1005, 11:53–14:45), but contemplates use in other applications (*see id.* at 14:49–15:42). In general, communication is initiated by a first user, referred to as the initiator or “User A” using “Device A,” who wants to gather information about another user, referred to as the target or “User B” using “Device B.” *Id.* at 9:40–55. Device A initiates communication by transmitting an identification request over the local wireless protocol. *Id.* at 10:38–40. Wireless devices within range of Device A, such as Device B, receive the request and respond by sending a reply message that includes

that device's identification ("device ID"). *Id.* at 10:41–47. Device A receives the reply message and transmits the device ID to the remote computer system over the wireless network and the Internet. *Id.* at 10:48–52. The computer system receives and uses the device ID to access information associated with the device ID within database 370, and transmits the information to Device A. *Id.* at 10:62–11:22. The transmitted information can be profile information regarding User B, which may include a variety of personal information about User B and other information, including "items or services for sale." *Id.* at 11:23–33.

## 2. Swartz

Swartz discloses a marketing and shopping system. Ex. 1007, 1:20–25. Figure 1 shows the system and is reproduced below:

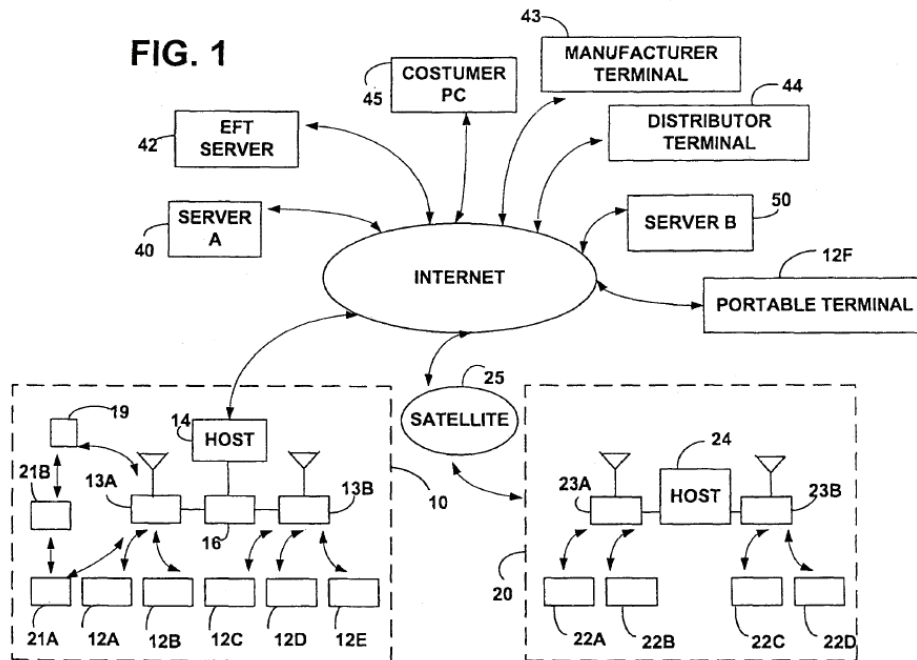


Figure 1 shows a block diagram of a preferred embodiment of the system, which includes portable terminals 12A–12F and central host 14. *Id.* at 3:62–63, 4:58–5:23, 9:8–11. In use, customers identify themselves to the

system, such as by inserting a loyalty card into a card reader. *Id.*  
at 18:29–33. The system then assigns a portable terminal to the user. *Id.*  
at 18:58–62. Alternatively, customers can use their own portable terminals.  
*Id.* at 19:48–49. The customer then proceeds through the store and uses the  
portable terminal to record items the customer wishes to purchase. *Id.*  
at 20:18–19. This can be done by, for example, using the portable terminal  
to scan a bar code on each item. *Id.* at 20:19–27. After the customer has  
selected all of the items to be purchased, the customer returns the portable  
terminal to the dispenser unit, and information collected with the portable  
terminal regarding the purchased items is processed by a central processing  
unit. *Id.* at 22:1–8. The customer then pays for the selected products, with  
the system accounting for any discounts or coupons to be applied. *Id.*  
at 23:8–11, 23:37–45. By allowing the customers, rather than store  
employees, to scan and bag their selected items as they shop, the store saves  
money and the customer saves time. *Id.* at 22:48–60.

### 3. *Kulakowski*

Kulakowski discloses “a network security system and method for detecting clones of true or properly registered client devices attempting to steal services without payment or otherwise mimic a real client device.”  
Ex. 1013 ¶ 2. Kulakowski recognizes that malfeasants attempt to steal distributed services by creating multiple clients with credentials identical to those of a valid client. *Id.* ¶ 3. Kulakowski’s system purports to detect such cloned devices. *Id.* ¶ 5.

Figure 4 is a flow diagram illustrating operation of Kulakowski’s system and is reproduced below:

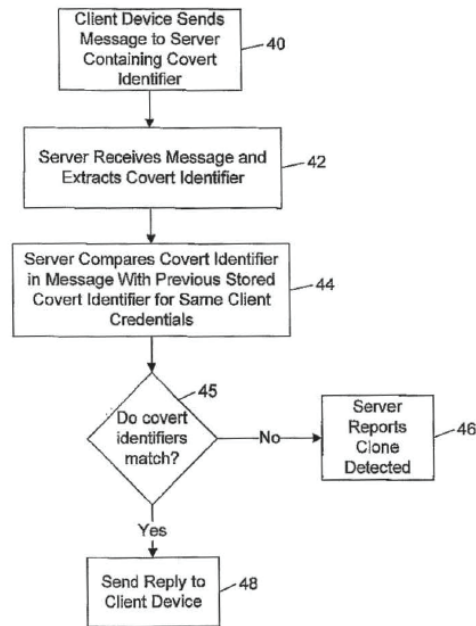


FIG. 4

Figure 4 is a flow diagram illustrating a method for detecting the presence of cloned client devices. Ex. 1013 ¶ 48. The detection process begins when a client device sends a message to a system server (step 40). *Id.* The message is adapted to include embedded therein a covert identifier derived from one or more operational events at the client device. *Id.* ¶¶ 6, 37. The covert identifier is unique to the specific client device and is based on covert data values such as the number of times a client has performed a certain event or the microsecond time of day that an event occurred. *Id.* ¶¶ 8, 34, 50. The server extracts the covert identifier upon receiving the message (step 42) and compares the extracted covert identifier with stored values corresponding to the client credentials (step 44). *Id.* ¶ 48. The server then determines whether there is a match (step 45). *Id.* If so, the message is processed further per normal operating procedures (step 48). *Id.* If there is no match,

the server generates a report to the system operator indicating that the client credentials may have been cloned (step 46). *Id.* The system operator can then take further action as deemed appropriate. *Id.* ¶41.

#### E. Asserted Anticipation by or Obviousness in View of Mgrdechian

Petitioner argues that claims 1, 5, 9, 12, 14, 15, 22, and 24 would have been unpatentable as being anticipated by or obvious in view of Mgrdechian. Pet. 20–53. In support of its showing, Petitioner relies upon the Williams Declaration. *Id.* (citing Ex. 1003). We have reviewed the Petition, Patent Owner Response, Petitioner Reply, Patent Owner Sur-reply, and evidence of record and determine that, for the reasons explained below, Petitioner has shown, by a preponderance of the evidence that claims 1, 5, 9, 12, 14, 15, 22, and 24 would have been unpatentable in view of Mgrdechian.

##### *1. Independent Claim 1*

Petitioner relies on Mgrdechian to disclose or suggest a method of using a server to facilitate a transaction between wireless devices as recited in claim 1. Pet. 27–42.

##### a. The Preamble

Claim 1 recites “[a] method for facilitating a transaction between a first wireless device and a second wireless device utilizing a server.” Ex. 1001, 23:22–24. Petitioner maps Mgrdechian’s “Device A,” which Petitioner characterizes as “a customer’s ‘wireless device,’” to the recited first wireless device and “Device B,” which Petitioner characterizes as “a ‘business[’s]’ ‘wireless device,’” to the recited second wireless device. Pet. 27 (alteration in original). Petitioner argues that Mgrdechian discloses

an exchange of information between these devices using a server, specifically noting an exchange of information “for ‘electronic commerce applications including micro-payments.’” *Id.* at 27–28 (citing Ex. 1005, 1:31–34, 5:4–7, 5:16–20, 7:43–45, 10:48–56).

Patent Owner does not contest this aspect of the Petition. *See generally* PO Resp.

We are persuaded by Petitioner’s contentions. Mgrdechian discloses a wireless communication system and method that provides an exchange of information between wireless devices. Ex. 1005, 1:32–35. In general, communication is initiated by a first user, referred to as the initiator or “User A” using “Device A,” who wants to gather information about another user, referred to as the target or “User B” using “Device B.” *Id.* at 9:40–55. Device A initiates communication by transmitting an identification request over the local wireless protocol. *Id.* at 10:38–40. Wireless devices within range of Device A, such as Device B, receive the request and respond by sending a reply message that includes that device’s identification (“device ID”). *Id.* at 10:41–47. Mgrdechian discloses that its “service and/or hardware” can be used “for the electronic commerce applications including micropayments,” which “are prepaid accounts that may be used for low dollar amount purchases.” *Id.* at 15:11–15; *see also id.* at 7:43–45. Mgrdechian discloses that “[u]sers of the device and service (i.e. senders or recipients, or both), may include individuals, businesses, not-for-profit organizations, advertisers, political action groups, or any other organization.” *Id.* at 8:1–4.

Accordingly, for the foregoing reasons, to the extent the preamble is limiting, Mgrdechian supports Petitioner’s contentions.

b. The Communicating Recitation

Claim 1 recites “communicating an identifier associated with said second wireless device to said first wireless device using a short range wireless connection, said first wireless device providing said identifier to said server.” Ex. 1001, 23:25–28. Petitioner maps the device identification of Device B to the recited identifier and the remote computer system to the recited server. Pet. 30. Petitioner argues that Device B transmits its identifier to Device A via Bluetooth and that Device A transmits the device identification to the remote computer system. *Id.*; *see also id.* at 30–32 (citing Ex. 1005, 3:14–24, 5:4–7, 5:16–20, 6:20–29, 8:1–4, 9:40–53, 10:10–15, Fig. 3A).

Patent Owner does not contest this aspect of the Petition. *See generally* PO Resp.

We are persuaded by Petitioner’s contentions. As noted above, Mgrdechian’s Device B receives an identification request from Device A and responds by sending a reply message that includes its device ID to Device A. Ex. 1005, 10:41–47. Device A receives the reply message and transmits the device ID to the remote computer system over the wireless network and the Internet. *Id.* at 10:48–52. The remote computer system “may be an Internet server computer and may include multiple computers coupled to the Internet for processing information.” *Id.* at 10:52–54.

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions.

c. The Establishing Recitation

Claim 1 recites “said server establishing location information associated with said first and said second wireless devices.” Ex. 1001,

23:28–30. Petitioner argues that Mgrdechian’s server correlates location information for Device A and Device B “because both are communicating using the ‘local wireless protocol’ and thus in ‘physical proximity’ to one another.” Pet. 33 (citing Ex. 1005, 6:20–29, 6:62–7:5, 10:10–15, 10:22–25, 14:49–63, 20:35–43). Petitioner argues that if Device B is associated with a business and in a fixed location, the server determines the location of both devices because the server retrieves profile information regarding the business device, “which includes the business’s ‘address,’” and Device A is in “physical proximity” with the business device. *Id.* (citing Ex. 1005, 6:20–29, 8:5–14, 10:22–25, 11:10–22, 14:49–63).

Alternatively, Petitioner argues that the server determines the “GPS information” of each device in order to provide the location information of nearby devices. Pet. 33 (citing Ex. 1005, 23:51–57, 24:14–25). Petitioner argues that it would have been obvious for the server to determine device location via GPS “to enable the server to establish geographic location information for both devices . . . such that the server advantageously can more precisely determine whether the two devices are operating ‘in the same area’ and have not moved away from one another since exchanging identifiers via Bluetooth in order to authorize a transaction.” *Id.* (citing Ex. 1003 ¶¶ 120, 123; Ex. 1005, 6:62–7:5, 10:29–38, 23:51–57, 24:14–25).

Patent Owner does not contest this aspect of the Petition. *See generally* PO Resp.

We are persuaded by Petitioner’s contentions. Mgrdechian discloses that “Device A may be a business or advertiser” and that “[t]he Devices (A and B) themselves can be of multiple forms” and “can have the capability to act as both Sender and Recipient.” Ex. 1005, 6:20–29, 14:51–55. Thus, we

find that Mgrdechian discloses that Device B can be a business device as asserted by Petitioner. Mgrdechian discloses that the profile information associated with users includes their addresses. *Id.* at 8:7–12. The server accesses this profile information based on the received device ID and transmits the information to the initiating device. *Id.* at 10:62–11:22.

Mgrdechian discloses that “GPS information rather than direct communications between devices [can be] used to provide responses to User A’s request to initiate messaging or other actions.” Ex. 1005, 7:16–19. “GPS information [can be] used for determining target devices operating in physical proximity to an initiating device.” *Id.* at 23:52–54.

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions.

#### d. The Determining and Transferring Recitation

Claim 1 recites “determining authentication information relating to said second wireless device or an entity associated with said second wireless device, transferring said authentication information between the server and the first wireless device.” Ex. 1001, 23:31–35. Petitioner refers to this recitation as “1.c” and maps the profile information of Device B to the recited authentication information and argues that the server sends the profile information to Device A. Pet. 36; *see also id.* at 36–38 (citing Ex. 1005, 4:4–14, 5:4–10, 5:21–30, 6:20–29, 8:5–14, 10:61–11:4, 11:28–33, 12:18–23, 14:49–63). Petitioner notes that the profile information can include images and argues that “[t]he business’s profile information authenticates its device by demonstrating that the device is associated with the business.” *Id.* at 36–37.

As noted above, Mgrdechian’s remote server retrieves and sends to Device A the profile information of Device B. Ex. 1005, 10:62–11:33. This profile information can include “images of the users associated with the IDs.” *Id.* at 5:4–10. “Once Device A has received images of the neighboring users from the server . . . , User A can scroll through them to uniquely select the [entity] with whom they are attempting to communicate . . . .” *Id.* at 5:21–24.

Patent Owner reads the Institution Decision to interpret the Petition to map the recited “authentication information” to “profile information of both users [which] can include filter parameters that restrict from what entities a user will accept messages.” PO Resp. 21 (alteration in original) (quoting Inst. Dec. 33). Patent Owner argues that, “if the filter parameters in a user profile are equivalent to the claimed ‘authentication information’ as the Board provided in its initial review, this cannot meet Element 1c because the filter parameters are not ‘transferred between the server and the first wireless device.’” *Id.* at 22; *see also* PO Sur-reply 2–3.

Petitioner argues that “[Patent Owner] mistakenly contends Mgrdechian’s filter parameters are the ‘authentication information.’” Pet. Reply 4 (citing PO Resp. 22). Rather, “the business’s profile is the claimed authentication information.” *Id.* (citing Pet. 36–38). Petitioner argues that “[Patent Owner] also conflates Petitioner’s (and the Board’s) explanation of [1.c] (relating to authentication information) with that of [1.d] (relating to authorization based in part on authentication information).” *Id.*

Patent Owner misreads the Institution Decision. As we explained, “Petitioner maps the profile information of Device B to the recited authentication information and argues that the server sends the profile

information to Device A.” Inst. Dec. 30 (citing Pet. 36). As we also explained, “Mgrdechian’s server uses the device ID (the identifier) received from Device A to retrieve *profile information (the authentication information) associated with that ID (regarding User B).*” *Id.* at 33 (emphasis added) (citing Ex. 1005, 10:62–11:22). The discussion of the Institution Decision quoted and discussed by Patent Owner relates to the step of providing authorization. *See* PO Resp. 21 (quoting Inst. Dec. 33); PO Sur-reply 2 (citing same).

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions.

e. The Providing Recitation

Claim 1 recites “said server providing authorization to said first wireless device or said second wireless device to proceed with said transaction based at least in part upon said identifier, said authentication information and the location information of said first and second wireless device.” Ex. 1001, 23:36–40. Petitioner argues that the profile information sent from the server to Device A includes “items or services for sale,” from which User A selects an item or service to purchase by sending a message to the server. Pet. 39 (citing Ex. 1005, 3:45–58, 6:20–29, 7:22–33, 11:28–33, 12:18–23, 15:11–15, 17:67–18:6). Petitioner argues that the server authorizes Device A to send micropayment information to Device B. *Id.* (citing Ex. 1005, 6:20–29, 7:22–33, 8:1–4, 14:49–63, 15:11–15). Petitioner argues that this authorization is based on 1) the device ID (that is, the recited identifier) of Device B because the server uses this information to determine where Device A sends messages and to retrieve the profile information of Device B; 2) the profile information of Device B (that is, the recited

authentication information) because the server retrieves the profile information, including filtering preferences, of Device B and applies the filtering preferences to Device A; and 3) the location information of the devices because the server only allows communication between the devices if they are in the same area. *Id.* at 39–40 (citing Ex. 1005, 3:45–58, 4:4–14, 5:4–10, 5:20–30, 6:20–29, 6:62–7:5, 7:22–33, 8:1–4, 10:29–38, 13:50–14:3, 14:49–63, 15:11–15, 17:67–18:6).

Patent Owner makes several arguments regarding this recitation. First, Patent Owner argues that Mgrdechian does not provide a thorough description of its electronic commerce application. PO Resp. 23–24. Patent Owner argues that “it is the user who provides ‘credit card authorization’ to authorize his participation in the dating app service of Mgrdechian” and a person having ordinary skill “would understand that it would be the user purchasing an item listed for sale by another user in a person-to-person transaction that provides authorization for a payment or ‘micropayment’ to proceed to the seller through his or her wireless device, not the Mgrdechian server.” *Id.* at 26 (emphases omitted) (citing Ex. 2010 ¶¶ 47–48); *see also* PO Sur-reply 7–9.

Petitioner replies that “[Patent Owner] ignores Mgrdechian’s teaching that ‘central servers...authorize...information to be conveyed between the devices...through one or more central servers.’” Pet. Reply 10 (emphases omitted) (citing Ex. 1005, 7:22–33; Pet. 40). Petitioner argues that Patent Owner’s discussion of a user authorizing payment for the dating application services is misplaced because “the Petition does not rely on this teaching of authorization.” *Id.*

We noted in the Institution Decision that Mgrdechian discloses that each user can use filter parameters to restrict from whom they will accept messages. Inst. Dec. 33 (citing Ex. 1005, 13:50–14:33). Mgrdechian’s server (through its web application) applies each user’s filters and only sends the information to the initiating device if both filters are satisfied. *See* Ex. 1005, 13:50–14:8; Inst. Dec. 33. Thus, it is the server that provides authorization. Patent Owner’s argument to the contrary (*see, e.g.*, PO Sur-reply 8 (“it is the user who performs the authorization, not the server” (emphasis omitted))) is belied and contradicted by Patent Owner’s acknowledgment that “after exchange of IDs and upload to [Mgrdechian’s] servers, *the servers may ‘enable, authorize or facilitate information to be conveyed between the devices either directly or through one or more central servers’*” (*id.* (emphasis added))).

Additionally, Patent Owner’s reference to a user authorizing fee payments for using the web application to his or her credit card (*see* PO Resp. 26) is inapposite because, as explained above, Mgrdechian discloses that the filtering process is the manner in which the server authorizes messaging between the two parties.

Next, Patent Owner argues that “Mgrdechian’s GPS information is not used as a basis for authorizing a transaction between different users.” PO Resp. 27 (emphasis omitted). Patent Owner argues that Mgrdechian only uses GPS information in its filtering process to introduce users but does not use GPS information in subsequent messaging between the parties. *Id.* at 27–28; PO Sur-reply 10–14.

Petitioner replies that “Mgrdechian teaches that, for each message routed through the server, the server filters ‘based on profile information’

using ‘device IDs of both the target and the initiating devices’ to determine whether to ‘authorize’ transmission of the message.” Pet. Reply 12 (citing Pet. 38–42; Ex. 1005, 3:45–58, 7:22–33, 13:50–14:3). According to Petitioner, “the server authorization is based in part on location information of the business and customer devices” because “the server allows the customer to send a message including a micropayment to the business if the two devices are in the same area.” *Id.* at 13 (citing Pet. 23–24, 32–36).

Patent Owner’s interpretation of Mgrdechian’s use of GPS information to “introduce” parties is consistent with our interpretation of Petitioner’s arguments in the Petition. *See* Inst. Dec. 33. The server uses GPS information to identify other users that are nearby as part of the communication commencement process, of which the filtering process is also a part. Ex. 1005, 7:16–19, 13:50–14:33, 23:52–54. Communication between two parties is allowed (that is, communication is authorized) only when the GPS information indicates that the parties are near each other and the filtering parameters for each user are satisfied. *Id.* at 13:50–14:8. Claim 1 requires no more.

However, we disagree with Patent Owner’s arguments that Mgrdechian does not use GPS information in subsequent messaging between parties. *See* PO Resp. 27–28 (citing Ex. 1005, 18:5–12). As explained above, Mgrdechian discloses using location information, such as GPS information, as part of its filtering process. *E.g.*, Ex. 1005, 7:16–19 (“GPS information rather than direct communications between devices [can be] used to provide responses to User A’s request to initiate messaging *or other actions*” (emphasis added)). The portion of Mgrdechian relied upon by Patent Owner explains that a “user can specify a location, method or format

for receiving a message,” such as via email, cellular phone message, instant message, or voicemail. *Id.* at 18:5–12. However, Mgrdechian goes on to disclose that “delivery locations or formats may be contingent upon the types of message or on the source of the message” (*id.* at 18:12–14), indicating that, regardless of the destination, these messages still pass through the server and, therefore, would be subject to its filtering process.

Next, Patent Owner argues that Mgrdechian does not disclose the providing recitation and Petitioner’s mapping cobbles together disparate disclosures of Mgrdechian. PO Resp. 29–33; PO Sur-reply 3–5. Patent Owner takes particular umbrage with Petitioner’s contention that “Mgrdechian discloses ‘electronic commerce applications including micro-payments’ between ‘users’ of wireless devices that include ‘businesses’ from which users can select their ‘favorite . . . items or services for sale.’” Pet. 24 (citing Ex. 1005, 7:43–45, 8:1–4, 11:28–33); *see also* PO Resp. 31 (quoting same). Patent Owner argues that Mgrdechian fails to provide sufficient details regarding the micropayments cited by Petitioner and facilitating payments from users to businesses. PO Resp. 31–33.

Similarly, Patent Owner argues that Mgrdechian does not disclose the “detailed process for purchasing” asserted by Petitioner. PO Resp. 33–45; PO Sur-reply 5–7. Patent Owner takes particular umbrage with Petitioner’s contention that the “‘server’ then ‘authorize[s] . . . information to be conveyed between the devices . . . through [the] central server[]’ including a ‘micropayment[]’ to the ‘business[]’ for the ‘purchase[].’” Pet. 39 (alterations in original) (citing Ex. 1005, 6:20–29, 7:22–33, 8:1–4, 14:49–63, 15:11–15); *see also* PO Resp. 35 (quoting same). Patent Owner argues that “Petitioner has created a detailed process for purchasing (*see* Petition, 39-40)

that exists nowhere in Mgrdechian” and, similarly, that “Mgrdechian does not teach or suggest any authentication steps associated with such payments.” PO Resp. 33, 35. Patent Owner argues that Mgrdechian fails to provide sufficient details regarding the micropayments cited by Petitioner, authorizing a device to proceed with a transaction, facilitating payments from users to businesses, items or services for sale, and using location information as a basis for providing authorization. PO Resp. 35–45; *see also id.* at 29–33 (making similar arguments).

Petitioner replies that “Mgrdechian’s teachings encompass transactions between a person and a business” and that Mgrdechian explicitly teaches using its messaging system in e-commerce applications. Pet. Reply 7 (citing Pet. 38–42; Ex. 1003 ¶¶ 130–138; Ex. 1005, 3:10–8:21, 8:65–14:45, 15:11–15). “Mgrdechian discloses ‘electronic commerce applications including micropayments ... for ... purchases’” and a person having ordinary skill “would have understood that the customer can use the customer device to select the ‘items or services’ to purchase in an ‘electronic commerce’ transaction with the business.” *Id.* at 8 (citing Pet. 39–41; Ex. 1003 ¶ 132; Ex. 1005, 11:28–33, 15:11–15). “Mgrdechian explicitly teaches ‘items for sale’ that can be purchased from a business with micropayments . . . .” *Id.* at 9 (citing Ex. 1005, 8:1–4, 15:11–15; Ex. 1043, 30:5–13).

Patent Owner’s arguments are reiterations of arguments presented in the Preliminary Response and which we addressed in the Institution Decision. As we explained,

Although Mgrdechian largely discusses the dating application embodiment of its messaging system (*see* Ex. 1005, 11:53–14:45), Mgrdechian contemplates use in other

applications (*see id.* at 14:49–15:42). One such application “includes the use of the service and/or hardware for the electronic commerce applications including micropayments.” *Id.* at 15:11–13. To this end, a device’s profile information can include “items or services for sale.” *Id.* at 11:23–33; *see also id.* at 21:6–8 (disclosing that profile information may include “any items or services for sale”), 21:53–55 (disclosing that users can include information about “items for sale” in their profile information). By disclosing that “the service and/or hardware” can be used for “electronic commerce applications” (*see id.* at 15:11–13), we understand Mgrdechian’s descriptions of its dating application, particularly those upon which Petitioner relies, to apply to the electronic commerce application.

Inst. Dec. 33. As we also explained in the Institution Decision,

We further agree with Petitioner’s mapping and arguments that Mgrdechian discloses basing authorization for the electronic commerce transaction on the identifier, authentication information, and location information. Mgrdechian’s server uses the device ID (the identifier) received from Device A to retrieve profile information (the authentication information) associated with that ID (regarding User B). Ex. 1005, 10:62–11:22. The profile information of both users can include filter parameters that restrict from what entities a user will accept messages. *Id.* at 13:50–14:33. And, as noted above, the server can use the device’s GPS location information “to provide responses to User A’s request to initiate messaging or other actions” rather than relying on “direct communications between devices.” *Id.* at 7:16–19.

*Id.*

f. Conclusion

For the foregoing reasons, we conclude that Petitioner has shown, by a preponderance of the evidence, that claim 1 is unpatentable as being anticipated by and obvious over Mgrdechian.<sup>5</sup>

*2. Dependent Claim 5*

Claim 5 depends from claim 1 and further recites “said server using said identifier to determine authentication information relating to the second wireless device or an entity associated with said second wireless device.” Ex. 1001, 23:50–53. Petitioner relies on its showing made regarding the determining and transferring recitation of claim 1. Pet. 42–43.

Patent Owner does not contest this aspect of the Petition. *See generally* PO Resp.

We are persuaded by Petitioner’s contentions. As we noted above, Mgrdechian discloses that each user can use filter parameters to restrict from whom they will accept messages. Ex. 1005, 13:50–14:33. The filter parameters are part of the profile information, which Petitioner maps to the recited authentication information. Ex. 1005, 13:50–14:33; Pet. 36, 42. Mgrdechian’s server (through its web application) applies each user’s filters and only sends the information to the initiating device if both filters are satisfied. *Id.* at 13:50–14:8; *see also* Inst. Dec. 33.

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions that Mgrdechian discloses the subject matter of

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<sup>5</sup> “It is well settled that ‘anticipation is the epitome of obviousness.’” *In re McDaniel*, 293 F.3d 1379, 1385 (Fed. Cir. 2002) (quoting *Connell v. Sears Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

claim 5, and we conclude that Petitioner has shown by a preponderance of the evidence that this claim is unpatentable as being anticipated by and obvious over Mgrdechian.

### *3. Dependent Claim 9*

Claim 9 depends from claim 1 and further recites “said server receiving information from either said first wireless device or said second wireless device indicating selection of one or more goods for purchase.” Ex. 1001, 23:64–67. Petitioner notes that Mgrdechian discloses that its system can be used to make micropayments, and argues that it would have been obvious “to send the identification of the item to be purchased along with the micropayment such that the business would know what the micropayment was for.” Pet. 43–44 (citing Ex. 1003 ¶ 145; Ex. 1005, 3:45–58, 6:20–29, 10:48–56, 11:28–33, 12:18–23, 14:49–63, 15:11–15).

Patent Owner argues that, because “Mgrdechian does not teach sending ‘micropayments’ as messages[,] . . . Mgrdechian also does not teach sending an identification of an item to be purchased as part of a ‘micropayment’ message.” PO Resp. 47–48; PO Sur-reply 15.

Petitioner replies that “Mgrdechian discloses and at minimum renders obvious sending micropayments as part of an electronic commerce transaction involving goods or services.” Pet. Reply 17 (citing Pet. 43–45; Ex. 1003 ¶¶ 142–145; Ex. 1005, 3:45–48, 11:28–33, 12:18–23; 15:11–15).

We agree with Patent Owner that Mgrdechian does not expressly disclose the subject matter of claim 9. Nonetheless, we are persuaded that such subject matter would have been obvious to a person of ordinary skill in the art at the time of the alleged invention. Mgrdechian discloses that its “service and/or hardware” can be used “for the electronic commerce

applications including micropayments,” which “are prepaid accounts that may be used for low dollar amount purchases.” Ex. 1005, 15:11–15; *see also id.* at 7:43–45. Mgrdechian discloses that its services include sending messages between users’ devices. *See, e.g., id.* at 3:45–48. The information transmitted between parties can include items or services for sale. *Id.* at 11:23–33. Mgrdechian discloses use of its system by businesses. *Id.* at 8:1–4. Petitioner’s declarant opines that it would have been obvious “to send the identification of the item to be purchased along with the micropayment such that the business would know what the micropayment was for.” Ex. 1003 ¶ 145. We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not rebut. *See, e.g.,* Ex. 2010 ¶ 82.

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions that Mgrdechian at least suggests the subject matter of claim 9, and we conclude that Petitioner has shown by a preponderance of the evidence that this claim is unpatentable as being obvious over Mgrdechian.

#### *4. Dependent Claims 12 and 14*

Claim 12 depends from claim 9 and further recites “initiating delivery of said purchased good or service after receiving confirmation that said goods or services are to be purchased.” Ex. 1001, 24:7–9. Claim 14 depends from claim 1 and similarly recites “initiating delivery of said purchased good or service after authorization of said transaction.” *Id.* at 24:12–14. Petitioner argues that it would have been obvious for the business to initiate delivery of purchased goods after receiving payment. Pet. 45–47 (citing Ex. 1003 ¶¶ 149–152, 157–159; Ex. 1005, 3:45–58,

4:23–26, 6:20–29, 7:28–32, 8:1–4, 11:28–33, 14:49–63, 15:11–15,  
21:19–21).

Patent Owner does not contest these aspects of the Petition. *See generally* PO Resp.

As noted above with respect to claim 9, Mgrdechian discloses using its messaging system to effect micropayments with businesses for the purchase of items or services. *See* Ex. 1005, 3:45–48, 7:43–45, 8:1–4, 11:23–33, 15:11–15. Petitioner’s declarant opines that it would have been obvious for the business to initiate delivery of a purchased item after it has been purchased. Ex. 1003 ¶¶ 150–152, 157–159. We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not rebut.

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions that Mgrdechian at least suggests the subject matter of claims 12 and 14, and we conclude that Petitioner has shown by a preponderance of the evidence that these claims are unpatentable as being obvious over Mgrdechian.

#### *5. Dependent Claim 15*

Claim 15 depends from claim 1 and further recites “wherein said first wireless device communicates with said server over a communication channel including wired connections.” Ex. 1001, 24:15–17. Petitioner notes that Mgrdechian discloses the first wireless device communicating with the server over the Internet, which Petitioner argues includes wired connections. Pet. 48 (citing Ex. 1003 ¶ 163; Ex. 1005, 10:48–56, 11:16–19).

Patent Owner does not contest this aspect of the Petition. *See generally* PO Resp.

We are persuaded by Petitioner’s contentions. Mgrdechian discloses that its server communicates with the wireless devices via a wireless network and the Internet. Ex. 1005, 10:48–56. Petitioner’s declarant testifies that “the infrastructure of the Internet uses wires at least in part, so any communication channel relying on the Internet would include wired connections.” Ex. 1003 ¶ 163. We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not rebut.

Accordingly, for the foregoing reasons, Mgrdechian supports Petitioner’s contentions that Mgrdechian discloses the subject matter of claim 15, and we conclude that Petitioner has shown by a preponderance of the evidence that this claim is unpatentable as being anticipated by and obvious over Mgrdechian.

#### *6. Dependent Claim 22*

Claim 22 depends from claim 5 and further recites “wherein said authentication information is based at least in part upon said identifier not having been previously used.” Ex. 1001, 24:44–46. Petitioner argues that, by disclosing that the device IDs can be “dynamic” and “unique,” each time a target device responds to an identification request, the target device identifier “dynamically changes to a new unique number [that] has never been previously used.” Pet. 49 (citing Ex. 1005, 4:56–57, 4:65–5:10, 6:20–29, 7:28–32, 8:1–4, 12:18–23, 14:49–63). Alternatively, Petitioner argues that “dynamically changing the ID after each use . . . would have been an obvious implementation choice for additional security.” *Id.* at 50 (citing Ex. 1003 ¶ 169).

Patent Owner argues that, although Mgrdechian mentions “embodiments of the devices can include cases where the [IDs] are static,

dynamic or pseudo-random[,]’ . . . Mgrdechian provides no description of such ‘dynamic or pseudo-random’ embodiments, or indicate that its reference to ‘dynamic’ refers to changing existing identifiers.” PO Resp. 58 (quoting Ex. 1005, 5:1–3). Patent Owner argues that Mgrdechian’s disclosure means the device identifiers “could be defined dynamically, such as when first transmitted by the devices, not that these IDs would ‘change over time.’” *Id.*; *see also* PO Sur-reply 19. Similarly, Patent Owner argues that Mgrdechian’s mention of “pseudo-random” device IDs does not mean that these IDs change over time. PO Resp. 59.

Petitioner replies that a person having ordinary skill would understand Mgrdechian to disclose or teach updating unique device IDs dynamically. Pet. Reply 22–23 (citing Pet. 25–26, 49–51; Ex. 1005, 3:34–35, 5:1–3, 16:16–31). Petitioner also argues that “at minimum, it would have been obvious.” *Id.* at 24 (citing Ex. 1003 ¶ 169).

We agree with Patent Owner that Mgrdechian does not expressly disclose the subject matter of claim 22. Nonetheless, we are persuaded that such subject matter would have been obvious to a person of ordinary skill in the art at the time of the alleged invention. Mgrdechian discloses that the device IDs are unique. *See, e.g.*, Ex. 1005, 4:53–57. Mgrdechian also discloses that “embodiments of the devices can include cases where the [IDs] are static, dynamic or pseudo-random.” Ex. 1005, 5:1–3. The parties’ declarants offer countering interpretations of such “dynamic” IDs. Petitioner’s declarant opines that an ordinarily skilled artisan would have understood that “a dynamic ID is one that changes over time based on one or more diverse criteria” and that, “when a ‘dynamic or pseudo-random’ ‘unique ID’ changes, the new ‘unique ID’ is associated with the user’s

profile information.” Ex. 1003 ¶ 169. According to Mr. Williams, “it would have been obvious to change a dynamic ID to a new identifier after each use so that old identifiers that may have been intercepted would no longer provide access to profile information on the server.” *Id.*

Patent Owner’s declarant, on the other hand, opines that an ordinarily skilled artisan would have understood Mgrdechian’s “dynamic” identifier “to mean that the device identifiers could be defined dynamically, such as when first transmitted by the devices, not that these IDs would ‘change over time.’” Ex. 2010 ¶ 97. Continuing, Dr. Foley opines that an ordinarily skilled artisan “would understand the reference to ‘pseudo-random’ to indicate how the specific identifier was created—not when or how it is assigned.” *Id.*

We credit the testimony of Petitioner’s declarant. As noted above, Mgrdechian discloses that the device IDs can be static or dynamic. Ex. 1005, 5:1–3. The parties agree that a “static” ID is one that does not change after it has been assigned. *See* Pet. Reply 23 (“static identifiers are ones that don’t change” (quoting Ex. 2016, 53:12–21)); PO Sur-reply 18 (“‘static’ means that the identifier does not change after it is assigned”). The testimony of Petitioner’s declarant that a “dynamic” device ID is one that changes over time explains how a “dynamic” device ID differs from a “static” device ID. Patent Owner’s declarant states that “dynamic” refers to how the ID is “defined,” but he does not explain what this means. Nor does Dr. Foley explain the difference between a “static” device ID and a “dynamic” device ID.

Based on Mr. Williams’s testimony, we conclude that it would have been obvious to change a device ID to a new, unique ID after each use. *See*

Ex. 1003 ¶ 169. Accordingly, we conclude that Petitioner has shown by a preponderance of the evidence that this claim is unpatentable as being obvious over Mgrdechian.

#### *7. Independent Claim 24*

Independent claim 24 recites a method substantially similar to the method recited in claim 1, but recites steps performed by the server. *Compare* Ex. 1001, 23:22–40, *with id.* at 24:50–67. The parties rely on the substantially the same arguments advanced regarding claim 1. *See* Pet. 51–53; PO Resp. 46–47; Pet. Reply 16; PO Sur-reply 14.

Accordingly, for the same reasons set forth in § II.E.1 above, we conclude that Petitioner has shown, by a preponderance of the evidence, that claim 24 is unpatentable as being anticipated by and obvious over Mgrdechian.

#### F. Asserted Obviousness in View of Mgrdechian and Swartz

Petitioner argues that claims 12–14 would have been obvious over the combination of Mgrdechian and Swartz. Pet. 53–59. In support of its showing, Petitioner relies upon the Williams Declaration. *Id.* (citing Ex. 1003). We have reviewed the Petition, Patent Owner Response, Petitioner Reply, Patent Owner Sur-reply, and evidence of record and determine that, for the reasons explained below, Petitioner has shown, by a preponderance of the evidence, that claims 12–14 would have been obvious in view of Mgrdechian and Swartz and that Petitioner has set forth reasoning with rational underpinnings why it would have been obvious to combine the teachings of Mgrdechian and Swartz.

*1. Dependent Claims 12 and 14*

Claim 12 depends from claim 9 and further recites “initiating delivery of said purchased good or service after receiving confirmation that said goods or services are to be purchased.” Ex. 1001, 24:7–9. Claim 14 depends from claim 1 and similarly recites “initiating delivery of said purchased good or service after authorization of said transaction.” *Id.* at 24:12–14. Petitioner relies on Mgrdechian as in § II.E above and relies on Swartz’s disclosure of the customer placing an order remotely, such as at another location in the store or via a home computer, and the store bringing the ordered items to the customer. Pet. 57–59 (citing Ex. 1007, 40:50–60, 43:59–63, Fig. 10). Petitioner argues that it would have been obvious to deliver purchased goods or services as part of Mgrdechian’s e-commerce transaction, as taught by Swartz, to “advantageously provide for fulfilling the business’s obligations when completing a ‘sale’ of ‘items or services.’” *Id.* at 54 (citing Ex. 1003 ¶¶ 179–181; Ex. 1005, 7:43–45, 11:28–33, 21:6–8).

Patent Owner argues that Swartz teaches the generation of a customer-specific shopping list requires several steps, including generating lists of previously purchased items, delivering the lists to the user, the user’s selection of items, and the system making sure the selected items are available. PO Resp. 51. Thus, Patent Owner argues, the modification to incorporate Swartz’s teachings into Mgrdechian’s system would be “a complete redesign of its entire system.” *Id.* at 52; *see also* PO Sur-reply 16.

Petitioner replies that its arguments in the Petition rely “on Swartz’s teachings simply to the extent express disclosure is required of initiating delivery of a purchased good or service.” Pet. Reply 19 (citing Pet. 54).

Rather than being a “complete redesign,” Petitioner argues that “[i]mplementing delivery of purchased goods in an electronic commerce system is merely a simple application of known methods to yield predictable results, and a POSITA would have been motivated to do so as a way of fulfilling the business’s obligations when completing a sale of items or services.” *Id.* (citing Pet. 54–55).

Patent Owner’s arguments are not consistent with Swartz’s disclosure. Swartz discloses that a user’s “shopping list may be derived from a number of sources.” Ex. 1007, 39:12–13. One such source for creating a shopping list is “the item selection method, i.e., selecting from a store’s list of available goods.” *Id.* at 40:50–51. Selecting from the store’s list of available goods provides “assurance of a match between items selected by a customer and items including brand, quantity and price available at the facility” and, thus, “permits for home delivery of items.” *Id.* at 40:56–60. As Mgrdechian discloses a user, such as a business, providing a list of items for sale (*see, e.g.*, Ex. 1005, 11:28–33), incorporating Swartz’s teaching of home delivery of items selected for purchase does not require the “complete redesign” of Mgrdechian’s system as asserted by Patent Owner.

We determine that Petitioner has set forth reasoning with rational underpinning for modifying Mgrdechian to initiate delivery of purchased goods. Accordingly, for the foregoing reasons, Mgrdechian and Swartz support Petitioner’s contentions that Mgrdechian and Swartz disclose the subject matter of claims 12 and 14, and we conclude that Petitioner has shown by a preponderance of the evidence that these claims are unpatentable as being obvious over the combination of Mgrdechian and Swartz.

*2. Dependent Claim 13*

Claim 13 depends from claim 1 and further recites “crediting an award program for the purchase of said goods or services.” Ex. 1001, 24:10–11. Petitioner relies on Mgrdechian as in § II.E above and relies on Swartz’s disclosure of a loyalty reward program. Pet. 58–59. Petitioner argues that it would have been obvious to include a loyalty reward program, as taught by Swartz, with Mgrdechian’s system to “advantageously ‘increase purchases’ by customers and ‘influence their choices.’” *Id.* at 55 (citing Ex. 1005, 7:43–45, 11:28–33; Ex. 1007, 37:20–21, 37:35–40).

Patent Owner argues that an ordinarily skilled artisan would not have combined the teachings of Mgrdechian and Swartz as set forth in the Petition because “Swartz . . . provid[es] loyalty points to repeat customers” and “the Mgrdechian system is intended to provide for *private* person-to-person communications and transactions.” PO Resp. 54–55; *see also* PO Sur-reply 17.

Petitioner replies that Patent Owner ignores Mgrdechian’s disclosure of using its messaging system in other applications, including electronic commerce transactions between a person and a business. Pet. Reply 20–21.

Patent Owner’s arguments do not consider the full disclosure of the asserted references. Mgrdechian discloses that “[u]sers of the device and service (i.e. senders or recipients, or both), may include individuals, businesses, not-for-profit organizations, advertisers, political action groups, or any other organization.” Ex. 1005, 8:1–4. Mgrdechian’s “service and/or hardware” can be used “for . . . electronic commerce applications.” *Id.* at 15:11–15; *see also id.* at 7:43–45.

Patent Owner’s arguments rely on Mgrdechian’s disclosure of using its messaging system as a dating application. *See* PO Resp. 55. However, as we noted in the Institution Decision,

Although Mgrdechian largely discusses the dating application embodiment of its messaging system (*see* Ex. 1005, 11:53–14:45), Mgrdechian contemplates use in other applications (*see id.* at 14:49–15:42). One such application “includes the use of the service and/or hardware for the electronic commerce applications including micropayments.” *Id.* at 15:11–13.

Inst. Dec. 33. The Petition relies on Mgrdechian’s electronic commerce application. *See, e.g.*, Pet. 27–28 (arguing that Mgrdechian discloses “‘exchange of information between wireless devices’ using a ‘server’ ‘for the electronic commerce applications including micropayments’”).

As noted by Petitioner, Swartz discloses providing “loyalty points” to a customer. Ex. 1007, 37:20–21. “The loyalty points may be redeemed for a discount[] off of products or to receive products free of charge.” *Id.* at 37:21–23. “The loyalty points awarded may be proportional to the amount of money spent by the customers. Extra loyalty points may be awarded to customers as a means to influence their choices.” *Id.* at 37:35–38. Petitioner’s declarant opines that incorporating Swartz’s loyalty points into Mgrdechian’s system would “beneficially incentivize[] customers to continue purchasing products from the business.” Ex. 1003 ¶ 184. We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not address squarely.

We determine that Petitioner has set forth reasoning with rational underpinning for modifying Mgrdechian to include Swartz’s teaching of using loyalty points. Accordingly, for the foregoing reasons, Mgrdechian

and Swartz support Petitioner's contentions that Mgrdechian and Swartz disclose the subject matter of claim 13, and we conclude that Petitioner has shown by a preponderance of the evidence that this claim is unpatentable as being obvious over the combination of Mgrdechian and Swartz.

#### G. Asserted Obviousness in View of Mgrdechian and Kulakowski

Claim 22 depends from claim 5 and further recites "wherein said authentication information is based at least in part upon said identifier not having been previously used." Ex. 1001, 24:44–46. Petitioner argues that claim 22 would have been obvious over the combination of Mgrdechian and Kulakowski. Pet. 60–65. Petitioner relies on Mgrdechian as in § II.E above and relies on Kulakowski to teach the use of a "covert identifier" in a network security system to detect clones that mimic a real client device. *Id.* at 62–65 (citing Ex. 1003 ¶¶ 96–99; Ex. 1005, 4:65–5:3, 5:4–10, 6:20–29, 7:28–32, 8:1–4, 12:18–23, 14:49–63, 16:29–32; Ex. 1013 ¶¶ 8, 9, 15, 47–49). Petitioner argues that it would have been obvious to use covert, changing identifiers, as taught by Kulakowski, with Mgrdechian's system to "advantageously improve security and detect spoofed or 'clone' client wireless devices." *Id.* at 61 (citing Ex. 1013 ¶¶ 8, 15, 48).

Patent Owner argues that the teachings of Kulakowski cannot properly be combined with those of Mgrdechian "because of the different architectures of those systems." PO Resp. 59. Patent Owner also argues that a person having ordinary skill would not use Kulakowski's covert identifiers in Mgrdechian's system because "Kulakowski seeks to prevent cloning by utilizing 'covert identifiers' that are known to no other client devices." *Id.* (emphasis omitted).

Petitioner replies that Kulakowski teaches the use of “identifiers that ‘change[] over time’” and that a person having ordinary skill “would have been motivated to apply Kulakowski’s teachings in implementing Mgrdechian’s ‘dynamic’ device identifier to advantageously improve security and detect spoofed or ‘cloned’ client wireless devices.” Pet. Reply 21–22 (citing Pet. 60–62; Ex. 1003 ¶¶ 94–97). Petitioner argues that the Petition only relies only on Kulakowski’s “known technique of using new, never-used device identifiers that are updated in coordination with the server in implementing Mgrdechian’s ‘dynamic’ device identifiers.” Pet. Reply 24–25 (citing Pet. 60; Ex. 1003 ¶ 189; *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012)). According to Petitioner, this would entail “nothing more than applying Kulakowski’s known technique of updating a device identifier over time to improve Mgrdechian’s similar wireless device that uses a dynamic ‘ID’ in the same way—to yield a dynamic unique identifier that is periodically updated to an identifier that has not previously been used.” *Id.* at 25 (citing Pet. 62; Ex. 1003 ¶¶ 94, 97–98, 188).

Patent Owner replies that “Kulakowski requires that the covert identifier be known only to the server and the device it will be used to authenticate” and “Kulakowski must keep the ‘covert’ identifier secret so that it can remain useful to the server to detect cloned devices.” PO Sur-reply 20.

We are not persuaded by Petitioner’s arguments, which rely on “Kulakowski’s teachings of using an updated unique *covert* identifier . . . so that clones using outdated identifiers can be detected.” Pet. 63 (boldface emphasis omitted, italicized 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 modified information to other devices, the modification proposed by Petitioner “creates the very risk Kulakowski is trying to prevent.” PO Resp. 59–60. 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 and detect spoofed or ‘clone’ client wireless devices.” *See* Pet. 61.

For the foregoing reasons, on this record, Petitioner has not shown, by a preponderance of the evidence that claim 22 is unpatentable over the proposed combination of Mgrdechian and Kulakowski.

### III. CONCLUSION<sup>6</sup>

In summary,

<b>Claim(s)</b>	<b>35 U.S.C. §</b>	<b>Reference(s)</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not Shown Unpatentable</b>
1, 5, 9, 12, 14, 15, 22, 24	102(b)	Mgrdechian	1, 5, 15, 24	9, 12, 14, 22
1, 5, 9, 12, 14, 15, 22, 24	103(a)	Mgrdechian	1, 5, 9, 12, 14, 15, 22, 24	
12–14	103(a)	Mgrdechian, Swartz	12–14	
22	103(a)	Mgrdechian, Kulakowski		22
<b>Overall Outcome</b>			<b>1, 5, 9, 12–15, 22, 24</b>	

### IV. ORDER

Accordingly, it is

ORDERED that claims 1, 5, 9, 12–15, 22, and 24 of the '842 patent are determined to be unpatentable; and

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<sup>6</sup> 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).

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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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