

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TARGET CORPORATION,
Petitioner,

v.

PROXICOM WIRELESS, LLC,
Patent Owner.

IPR2020-00931
Patent 8,090,359 B2

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 Some 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, 14–18, 27, 31, 36, 37, 42, 43, 48, 49, and 52–55 (“the challenged claims”) of U.S. Patent No. 8,090,359 B2 (Ex. 1001, “the ’359 patent”). Paper 2 (“Pet.”), 1. Proxicom Wireless, LLC (“Patent Owner”) filed a Preliminary Response. Paper 9. On November 10, 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.”), 31.

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 18, “PO Resp.”), Petitioner filed a Reply to the Patent Owner Response (Paper 21, “Pet. Reply”), and Patent Owner filed a Sur-reply to Petitioner’s Reply (Paper 22, “PO Sur-reply”). An oral hearing was held on August 19, 2021. A transcript of the hearing has been entered into the record. Paper 28 (“Tr.”).

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.”).¹

For the reasons that follow, we conclude that Petitioner has proven by a preponderance of the evidence that claims 1–5, 14–18, 27, 31, 36, 42, 48,

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

49, and 52–55 of the '359 patent are unpatentable. It, however, has failed to meet its burden of proof regarding the unpatentability of claims 37 and 43.

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 '359 patent is the subject of the following district court proceedings:

Proxicom Wireless, LLC v. Target Corporation, No. 6:19-cv-1886 (M.D. Fla. filed Oct. 2, 2019)² and

Proxicom Wireless, LLC v. Macy's, Inc., No. 6:18-cv-00064 (M.D. Fla. filed Jan. 12, 2018).

Pet. 6; Paper 4, 2. The parties further note that the '359 patent is the subject of a petition for *inter partes* review filed by Petitioner and challenging different claims in IPR2020-00932. Pet. 6; Paper 4, 2.

D. The Challenged Patent

The '359 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, 2:53–57. The devices use a short range communication protocol,

² Stayed on June 17, 2020, pending resolution of ten petitions for *inter partes* review filed by Petitioner. See Paper 6.

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 other devices. *Id.* at 6:33–46. Each device transmits identifier information via short range communication as a proximity detection process. *Id.* at 6:49–53. 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 3:55–62. 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 4:12–60.

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, 7:20–29. This application is illustrated in Figure 2, which is reproduced below:

Figure 2

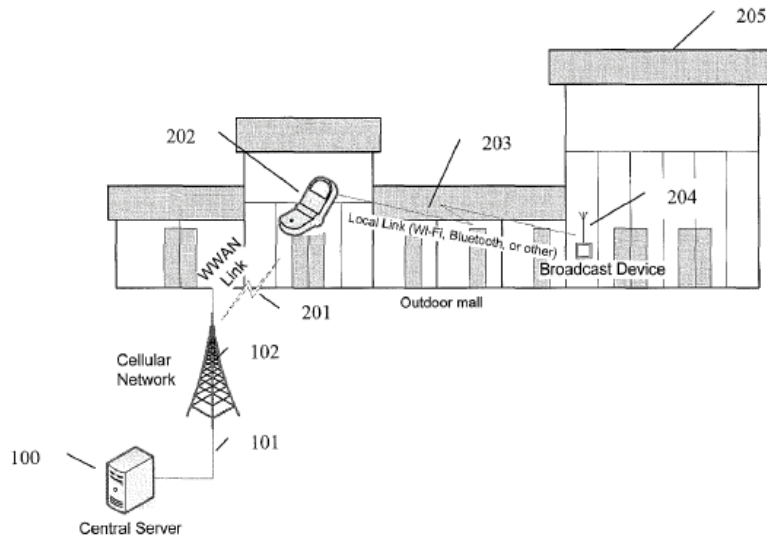


Figure 2 shows a block diagram of fixed broadcast device 204 and mobile device 202. *Id.* at 5:6–7. The user’s mobile device detects the broadcast device and transmits the broadcast device’s identifier information, along with a request for information regarding the broadcast device, to central server 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, 14–18, 27, 31, 36, 37, 42, 43, 48, 49, and 52–55 of the ’359 patent. Pet. 1, 10. Claims 1 and 14 are independent. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method for a central server to exchange information between one or more wireless devices comprising the steps of:
 - the central server receiving second device identifier information from a first wireless device, the second device identifier information having been collected by the first wireless device from a second device and wherein said second device provides the second device identifier information to the first wireless device using short range communication without the use of wires from the second device to the first wireless device;
 - said central server using the second device identifier information to determine one or more of an identity or related information concerning an entity or object located in proximity to the second device; and
 - subsequent to the step of the central server receiving the second device identifier information from the first wireless device, the central server taking further action to deliver information or a service to the first wireless device based at least in part upon (a) the second device identifier and (b) at least one of the following:
 - (i) feedback ratings relevant to an entity associated with either the first wireless device or the second device identifier information;
 - (ii) information representing a reward for an entity associated with the first device's participation in a loyalty program; or
 - (iii) a current step in a multiple step process for an ongoing electronic commerce transaction.

Ex. 1001, 23:35–63.

F. Instituted Grounds of Unpatentability

The Petition relies on the following prior art references:

Name	Reference	Exhibit
Perttila	US 2004/0243519 A1, published Dec. 2, 2004	1006
Insolia	US 8,121,917 B2, issued Feb. 21, 2012	1008

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

Claims Challenged	35 U.S.C. §	Reference(s)
1–5, 14–18, 27, 31, 36, 37, 42, 43, 48, 52, 55	102(b) ³	Perttila
1–5, 14–18, 27, 31, 36, 37, 42, 43, 48, 49, 52, 55	103(a)	Perttila
27, 31, 53, 54	103(a)	Perttila, Insolia

Pet. 10. 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.

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) (2019). 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).

³ The application resulting in the ’359 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.

“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.⁴ *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

⁴ The parties have not directed us to any such objective evidence.

professional experience in the field of wireless communications.”

Pet. 13–14. Petitioner acknowledges that “graduate education could substitute for professional experience” and “significant experience in the field could substitute for formal education.” *Id.* at 14 (citing Ex. 1003 ¶¶ 36–38).

Patent Owner concedes that the level of skill as defined by Petitioner “is generally sufficient for the Board to evaluate the Petition Grounds.” PO Resp. 9. However, Patent Owner also notes that “Petitioner’s proposed level of skill in the art does not include any reference to electronic commerce” and contends that “a POSITA should also have 1-2 years of experience designing or implementing systems for electronic commerce including the use of wireless communications.”⁵ *Id.* at 10 (citing Ex. 2010 ¶¶ 6–9, 22–24).

The level of ordinary skill in the art may be 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. We note that we would reach the same conclusions herein using Patent Owner’s alternate definition.

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

⁵ We note that Patent Owner does not assert that this additional proposed requirement has any bearing on any disputed issue in this case.

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). 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 specification.” Pet. 14. Petitioner asserts that the challenged claims use “terms of degree (e.g., ‘short range’ communication/link, ‘wide area’ link/network/technology, ‘local [area/wireless] link’),” but does not explain how this assertion affects claim construction. *Id.* at 14–15 (alteration in original). Petitioner acknowledges that “[a] district court in another proceeding has construed terms of this

patent,” but argues that those “constructions do not impact the outcome of this IPR as the prior art . . . meets the limitations under these constructions.” *Id.* at 15 (citing Ex. 1003 ¶ 71; Ex. 1021).

Patent Owner argues that we should interpret two claim terms: “an entity or object located in proximity to the second device” and “wireless device.” PO Resp. 12–19. We address each of these terms below.

1. “*an entity or object located in proximity to the second device*”

Patent Owner argues that “an entity or object located in proximity to the second device,” as used in independent claims 1 and 14, should be construed “to require that the claimed ‘entity or object’ must have a physical presence.” PO Resp. 12. According to Patent Owner, “the reference to the object being ‘located in proximity to the second device’ makes clear that the claimed ‘object’ of that phrase must be physically present.” *Id.* at 13. Patent Owner argues similarly that “located in proximity to the second device” also applies to the recited “entity,” thus requiring “that the ‘entity’ referred to in this claim element must be physically present.” *Id.* Patent Owner argues that “proximity” is used in accordance with its ordinary and customary meaning and refers to physical placement. *Id.* at 15–17.

Petitioner argues that we need not construe “entity or object” to require a physical presence as proposed by Patent Owner because “a device can be ‘in proximity’ to intangible objects.” Pet. Reply 2. Petitioner argues that Patent Owner’s citations to the ’359 patent’s use of “proximity” are not relevant to how the term is used in the claims. *Id.* at 3–4 (citing PO Resp. 15–17). Petitioner argues that Patent Owner’s declarant did not base his interpretation of “proximity” on how the term is used in the specification of the ’359 patent. *Id.* at 4–5.

Patent Owner replies that “object” must be construed to have a physical presence because “the claimed ‘object’ is limited by the requirement that it be ‘located in proximity to the second device.’” PO Sur-reply 1; *see also id.* at 2–4 (presenting similar arguments). Patent Owner contends that Petitioner’s assertions regarding Patent Owner’s declarant take the testimony out of context. *Id.* at 5–9. According to Patent Owner, “[t]he crucial question about ‘an entity or object located in proximity to the second device’ is whether the claimed ‘entity or object’ can be ‘located in proximity to the second device’ if the ‘entity or object’ is not physically present.” *Id.* at 5.

Notwithstanding the arguments in its briefing, Petitioner’s counsel acknowledged during the hearing that the claims require the entity or object to have a physical presence. *See, e.g.,* Tr. 8:17–19 (“[T]here’s no debate . . . that physical presence is connoted by the word ‘proximity’ and by ‘located.’”). There is, accordingly, no controversy regarding whether “an entity or object located in proximity to the second device” requires the entity or object to have a physical presence. Moreover, as explained below our decision does not depend on an express construction of this term. We conclude, therefore, that there is no need for us to construe this term.

2. “wireless device”

Patent Owner argues that, as recited in the challenged claims, “wireless device” “refer[s] to wireless communication capabilities, not that a wireless device would be precluded from having any external wires whatsoever.” PO Resp. 19. However, Patent Owner concedes that construction of “wireless device” is “not necessary to resolve the dispute here.” *Id.*

Petitioner argues that “‘wireless device’ should be construed to require a device without external wires,” noting that the claims of the ’359 patent recite a “wireless device” rather than a “wireless communication device.” Pet. Reply 5–6. However, Petitioner also concedes that “no construction of this term is necessary.” *Id.* at 5.

No construction of this term is necessary. The parties both agree that no construction is needed, and as explained below our decision does not depend on a construction of this term.

D. Overview of the Asserted Prior Art

1. Perttala

Perttala discloses “a system, apparatus, and method for sending service data in response to electronic communications between a user communications device and a merchant-media arrangement.” Ex. 1006 ¶ 8. Figure 1a shows such a system and is reproduced below:

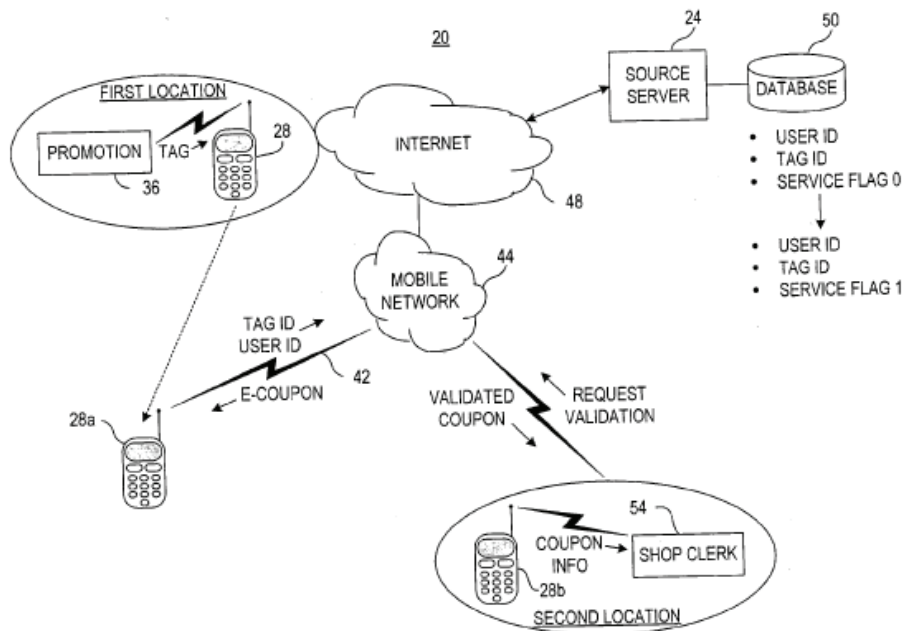


FIG. 1a

Figure 1a shows coupon-retrieval system 20 for the communication of an electronic coupon to user 28 via link 42 established with source server 24 by mobile communications device 28a. *Id.* ¶¶ 19, 36. When the user's mobile device is within proximity of merchant-media arrangement 36, which may be a poster or the like, the arrangement transmits to the mobile device a merchant ID code and, optionally, link information for connecting to the server. *Id.* ¶ 37. This transmission may be via radio frequency identification (RFID) or Bluetooth. *Id.* The mobile device establishes a communication link with the server through a mobile network or the Internet and transmits a merchant-information-request signal to the server. *Id.* ¶ 38. The server first extracts the mobile device ID and the merchant ID code from the request. *Id.* The server then generates an electronic coupon based on the merchant ID code and provides the user with an option to download the coupon. *Id.* ¶¶ 28, 37–39.

2. *Insolia*

Insolia discloses “systems and methods for implementing a loyalty program.” Ex. 1008, 1:7–8. *Insolia* recognizes that, regarding the immediate consumption channel, which provides food and beverages that are immediately available and ready to consume from vending machines and the like, the diverse nature of the equipment used and of the consumer's interaction with the equipment can complicate the implementation of broad marketing opportunities. *Id.* at 1:12–55. *Insolia* purports to provide a system that overcomes these drawbacks. *Id.* at 2:7–11. Figure 1 illustrates *Insolia*'s system and is reproduced below:

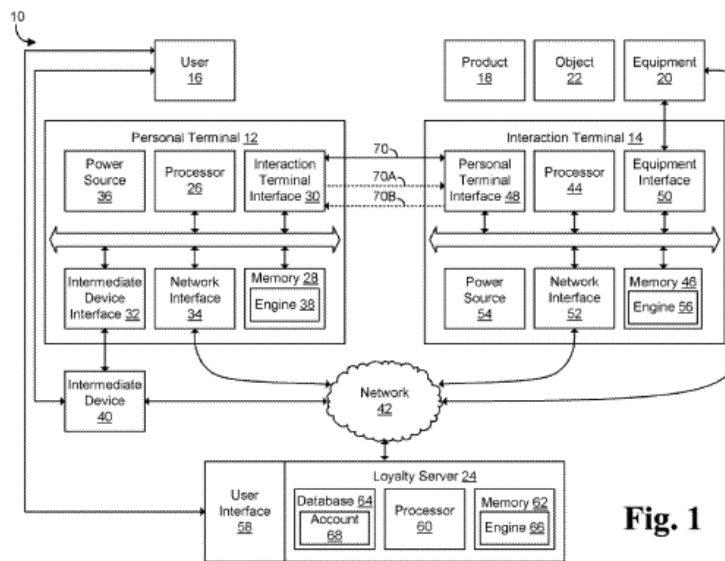


Fig. 1

Figure 1 shows a block diagram illustrating a system for implementing a loyalty network. *Id.* at 3:49–50. Loyalty program management system 10 includes personal terminal 12, interaction terminal 14, and loyalty server 24. *Id.* at 5:47–64. The personal terminal is transported by user 16. *Id.* at 5:65–66. The interaction terminal can be associated with product 18, such as a beverage, equipment 20, such as a vending machine, or promotional object 22, such as a poster. *Id.* at 5:51–53, 6:9–37. The personal terminal and the interaction terminal communicate when the personal terminal is brought within proximity of the interaction terminal. *Id.* at 9:12–18. A benefit, such as a loyalty point, can be awarded to the user for interacting with the interaction terminal. *Id.* at 9:58–64. The benefit can be stored on one or both of the personal terminal and the loyalty server. *Id.* at 13:35–38. When used, the benefit is communicated to the equipment to provide the user with a product for free or at a reduced price. *Id.* at 14:31–35. In some embodiments, the rate at which the loyalty points are awarded can be filtered to limit the accrual of rewards to a predefined rate. *Id.* at 36:19–20.

E. Asserted Anticipation by or Obviousness in View of Perttila

Petitioner argues that claims 1–5, 14–18, 27, 31, 36, 37, 42, 43, 48, 49, 52, and 55 would have been unpatentable as being anticipated by or obvious in view of Perttila. Pet. 17–57. 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, 14–18, 27, 31, 36, 42, 48, 49, 52, and 55 would have been unpatentable in view of Perttila. Petitioner, however, has failed to show, by a preponderance of the evidence, that claims 37 and 43 would have been unpatentable.

1. Independent Claim 1

Petitioner relies on Perttila to disclose or suggest a method for a central server to exchange information as recited in claim 1. Pet. 25–33.

a. Preamble

Claim 1 recites “[a] method for a central server to exchange information between one or more wireless devices.” Ex. 1001, 23:35–36. Petitioner maps Perttila’s source server 24 to the recited central server, and user-communication device 28 and merchant-media arrangement 36 to the recited wireless devices. Pet. 25 (citing Ex. 1006 ¶¶ 8–9); *see also id.* at 25–27 (citing Ex. 1003 ¶ 113; Ex. 1006 ¶¶ 8–9, 12, 19, 25, 60, Fig. 1a). Petitioner argues that “a POSITA would have understood that Perttila discloses the portable merchant-media arrangement is wireless, and at minimum it would have been obvious to use a wireless merchant-media

arrangement . . . to advantageously enable easy location in a store.” *Id.* at 25 (emphasis omitted) (citing Ex. 1006 ¶ 60).

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

Perttila discloses that, when a user’s mobile communications device 28 is within proximity of merchant-media arrangement 36, the arrangement transmits a merchant ID code to the mobile device. Ex. 1006 ¶ 37. The mobile device then establishes a communication link with source server 24 and transmits a request containing the ID code to the server, and the server generates an electronic coupon based on the merchant ID code and provides the user with an option to download the coupon. *Id.* ¶¶ 36–39. Perttila discloses that the user’s mobile communications device and the merchant-media arrangement communicate wirelessly. *See id.* ¶ 37 (disclosing that the merchant-media arrangement can transmit the merchant ID code to the mobile device via radio frequency identification (RFID) or Bluetooth).

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

b. The Receiving Recitation

Claim 1 recites,

the central server receiving second device identifier information from a first wireless device, the second device identifier information having been collected by the first wireless device from a second device and wherein said second device provides the second device identifier information to the first wireless device using short range communication without the use of wires from the second device to the first wireless device.

Ex. 1001, 23:38–45. Petitioner maps Perttila’s user-communication device 28 to the recited first wireless device, merchant-media arrangement 36 to the recited second device, and the “merchant ID code” to the recited second device identifier information. Pet. 27–29 (citing Ex. 1006 ¶¶ 9, 12–15, 37–38). Petitioner notes that the merchant-media device includes RFID tag 38 or, alternatively, a local short-range wireless access point or beacon device. *Id.* at 28–29 (quoting Ex. 1006 ¶¶ 37–38). Petitioner clarifies that it is this short-range wireless device component of the merchant media arrangement that it maps to the recited second device. Pet. Reply 7; *see also* Inst. Dec. 19 (“Petitioner notes that the merchant-media device includes RFID tag 38 or, alternatively, a local short-range wireless access point or beacon device.” (citations omitted)).

Patent Owner argues that Petitioner’s mapping of Perttila’s short-range wireless device to the recited second device is incompatible with its mapping of Perttila’s merchant ID code to the recited second device identifier information. PO Sur-reply 16–17. Specifically, Patent Owner argues that Petitioner has not explained adequately how Perttila’s merchant ID code, which Petitioner maps to the recited second device identifier (*see* Pet. Reply 7–8), identifies the RFID tag.

When questioned about this argument during the hearing, Petitioner’s counsel argued that Perttila’s merchant-media ID code identifies both the transmitter and the billboard. Tr. 18:19–22:17 (citing Ex. 1006 ¶¶ 27–28, 37–38, 62–63, Fig. 1a).

Perttila discloses that the server uses the merchant-media ID code “to associate the *promotional information* with an e-coupon to be provided to the user visiting th[e] billboard location.” Ex. 1006 ¶ 28 (emphasis added);

see also id. ¶ 29 (characterizing the ID code as “the merchant/billboard ID code”). Thus, the merchant-media ID code identifies the billboard. Perttila also discloses that “the source server 24 extracts the user/terminal ID along with *the tag (merchant-media) ID* from the request. . . . The extracted user/terminal ID and the *tag ID* are stored by the source server” *Id.* ¶ 38 (emphases added); *see also id.* ¶ 42 (“This validity check can be performed by searching the database for a file with user ID and tag ID of the void request.”). Thus, the merchant-media ID code identifies the transmitter.

Additionally, and as noted above, Perttila discloses that merchant-media arrangement 36 transmits the merchant-media ID code to mobile communications device 28 over a short-range wireless communication link, and the mobile device sends the ID code to source server 24. Ex. 1006 ¶¶ 36–39.

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

c. The Determining Recitation

Claim 1 recites “said central server using the second device identifier information to determine one or more of an identity or related information concerning an entity or object located in proximity to the second device.” Ex. 1001, 23:46–49. Petitioner maps Perttila’s electronic coupon to the recited identity or related information and “the content promoted by [Perttila’s] billboard” to the recited entity or object and argues that the “‘remote source server’ generates ‘an electronic coupon’ ‘in the form of an electronic data set corresponding to the merchant-media’s ID code,’ [an] ‘electronic coupon that corresponds to the content promoted by the

billboard.” Pet. 29; *see also id.* at 29–31 (citing Ex. 1006 ¶¶ 15, 27–29, 37, 39).

Patent Owner makes several arguments regarding this recitation. First, Patent Owner interprets the Petition to map Perttila’s billboard to the recited second device and argues that Perttila does not disclose using its merchant-media arrangement’s ID code “to determine information about ‘an entity or object located *in proximity to*’ [the] billboard.” PO Resp. 30; *see also id.* at 34–35 (“Petitioner has identified the merchant media arrangement/billboard itself as the ‘second device’ of the challenged claims.”). Rather, Patent Owner argues, Perttila’s electronic coupon is associated with the billboard itself. *Id.* at 35–36 (“The Perttila server merely uses the merchant media ID to determine the billboard to which the ID relates [T]he Perttila server simply provides the coupon that it has been told to provide based on the merchant media ID.”). “Perttila does not teach that the entity or object being *promoted by* the billboard of the ‘merchant-media arrangement’ is located *in proximity to* the disclosed ‘merchant-media arrangement’” *Id.* at 33–34.

Petitioner replies that Perttila’s electronic coupon is related information concerning an object in proximity to the “short-range communicator” (that is, the RFID tag or Bluetooth link). Pet. Reply 7. Petitioner argues that such objects include the billboard and content promoted by the billboard. *Id.*; *see also id.* at 12 (“Because the billboard (and thus the content it is promoting) is, in fact, in proximity to (‘co-located’ with) the merchant-media arrangement’s tag/beacon, the billboard and separately its promotional content each meet the requirement of the claimed object.” (citing Pet. 29–31; Ex. 1003 ¶¶ 83, 117–118)).

Patent Owner replies that Petitioner’s mapping of the short-range transmitter to the recited second device is inconsistent with Petitioner’s mapping of Perttila’s merchant ID code to the recited second device identifier information because the merchant ID code identifies the billboard (or its content), but does not identify the RFID tag or Bluetooth link. PO Sur-reply 16–17. Patent Owner argues that mapping the content promoted by Perttila’s billboard to the recited object does not satisfy the claim requirements because this mapping “results in reading the claim language to mean ‘[second device] in proximity to the second device.’” *Id.* at 18–22 (alteration in original).

As we noted in the Institution Decision, Perttila’s merchant-media arrangement includes RFID tag 38 (or, alternatively, a Bluetooth link). *See* Inst. Dec. 19, 21. Petitioner maps the short-range transmitter to the recited second device (*see* Pet. 28–29; Inst. Dec. 19, 21) and maps the electronic coupon to the recited identity or related information (*see* Pet. 29; Inst. Dec. 20). Petitioner maps the billboard and, separately, its contents to the recited entity or object, which is in proximity to the short-range transmitter. *See* Pet. 29; Pet. Reply 7–8; Inst. Dec. 21. Perttila’s server uses the merchant ID code to generate an “electronic coupon that corresponds to the content promoted by the billboard.” *E.g.*, Ex. 1006 ¶¶ 27, 33. Thus, Perttila supports Petitioner’s contentions.

Patent Owner equates “merchant-media arrangement” as a billboard; that is, a single entity. In the Institution Decision, we noted that the merchant-media arrangement includes a billboard and the RFID tag or Bluetooth link is “co-located” at the merchant-media arrangement. Inst. Dec. 19–21. Petitioner maps the “short-range communicator,” which it

defines as the RFID tag or Bluetooth link, to the recited second device. Pet. Reply 7; *see also* Pet. 29–30. Thus, we disagree with Patent Owner’s assertion that the Petition maps the merchant media arrangement, as a singular entity, to both the recited second device and the recited entity or object.

We further disagree with Patent Owner’s assertion that the electronic coupon does not correspond to the content promoted by the billboard. *See* PO Resp. 34–35. Perttila discloses that the “downloadable electronic coupon . . . corresponds to the content promoted by the billboard.” Ex. 1006 ¶ 27 (emphasis added). Perttila’s remote server uses the merchant-media ID code “to associate the promotional information with an e-coupon to be provided to the user visiting this billboard location.” *Id.* ¶ 28.

In its Reply, Petitioner further maps the “store in which the merchant-media arrangement is located” and “product offerings in the store” to the recited entity or object. Pet. Reply 7–8 (citations omitted). We disagree with these mappings. As noted above, Perttila’s e-coupon corresponds to the content of the billboard. Petitioner has cited no disclosure that Perttila’s e-coupon corresponds to the store or an item in the store.

Regarding Petitioner’s “store in which the merchant-media arrangement is located” mapping, Petitioner does not explain adequately how Perttila’s e-coupon, which Petitioner maps to the recited identity or related information, concerns the store itself. Rather, Petitioner relies only on products offered for sale within the store. *See* Pet. Reply 13; Tr. 22:25–23:24.

Regarding Petitioner’s “product offerings in the store” mapping, at best, Petitioner appears to present an inherency argument that if the billboard

is placed in a store, the advertised products must be in the store. *See* Pet. Reply 13 (“Perttila expressly discloses that the merchant-media arrangement may be placed ‘at the store itself,’ such that the location where product offerings corresponding to the e-coupons are redeemed is the ‘same location’ as that where the e-coupons are provided.” (citing Ex. 1006 ¶¶ 28, 39; Pet. 21–22, 29–31; Ex. 1003 ¶¶ 87, 117–118)). However, while it may be likely that the advertised products are in the store, this is not necessarily the case. For example, the products may be out of stock, in which case Petitioner acknowledges that the claim language is not satisfied. Tr. 24:7–12 (“[T]he limitations are met when the e-coupon is distributed for a product, and that product is in the store with the merchant media arrangement. If there are times, for example, when the store is sold out of that particular product, that wouldn’t be met during those times.”). Petitioner’s assertions regarding the recited entity or object corresponding to product offerings within the store are based on speculation, which is insufficient to satisfy the requirements for an inherency argument. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (“Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” (citations omitted)).

Additionally, Patent Owner argues that Perttila’s server does not make a determination that any object is in proximity to the second wireless device. PO Resp. 32; *see also* PO Sur-reply 12–13.

Petitioner argues that claim 1 does not require the central server to make a determination that an object is in proximity to the second device. Pet. Reply 8–9.

Claim 1 requires the central server to make a single determination—the “identity or related information concerning an entity or object located in proximity to the second device”—but does not require the server to also determine that the object (or entity) is in proximity to the second device. Moreover, Patent Owner’s arguments are inconsistent with the ’359 patent, which indicates that the first device is positioned in proximity to an object about which information is delivered rather than the server making a determination that an object is in proximity to the second device. *See, e.g.*, Ex. 1001, 8:43–52 (discussing the first device being “tied to a location or product”). Even if we were to interpret the claims as containing such a requirement, as noted above Perttila’s server “associate[s] the promotional information with an e-coupon to be provided to the user visiting this billboard location.” Ex. 1006 ¶ 28. The “the promotion information is linked to th[e] particular location.” *Id.* Thus, Perttila at least suggests that its server has information that the billboard is in proximity to the RFID tag.

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

d. The Delivering Recitation

Claim 1 recites,

subsequent to the step of the central server receiving the second device identifier information from the first wireless device, the central server taking further action to deliver information or a service to the first wireless device based at least in part upon (a) the second device identifier and (b) at least one of the following:

- (i) feedback ratings relevant to an entity associated with either the first wireless device or the second device identifier information;

- (ii) information representing a reward for an entity associated with the first device's participation in a loyalty program; or
- (iii) a current step in a multiple step process for an ongoing electronic commerce transaction.

Ex. 1001, 23:50–63. Petitioner maps Perttila's electronic coupon to the recited information or service and argues that the coupon is transmitted to user-communication device 28 and “can be ‘validated to facilitate merchant transactions’ in an ‘electronic commerce arrangement.’” Pet. 31; *see also id.* at 31–33 (citing Ex. 1006 ¶¶ 9, 15, 28, 33, Fig. 1b).

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

Perttila discloses that source server 24 uses the merchant ID code to generate an “electronic coupon that corresponds to the content promoted by the billboard.” Ex. 1006 ¶ 27. The server provides the user with an option to download the coupon. *Id.* ¶¶ 28, 37–39. Perttila explains that the electronic coupon is part of an electronic commerce transaction: “The remote server can generate and return an appropriate electronic commerce application, such as an electronic coupon by relying on the merchant ID code to identify the type of product conveyed by the merchant-media arrangement.” *Id.* ¶ 33. The user then redeems the coupon, either directly with the retailer or through continued communication with the server. *Id.* ¶¶ 40–43.

Accordingly, for the foregoing reasons, Perttila supports Petitioner's contentions.

e. 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 Perttila.⁶

2. *Independent Claim 14*

Petitioner relies on Perttila to disclose or suggest a server for exchanging information as recited in claim 14. Pet. 41–45. In large measure, the recitations of claim 14 are similar to those of claim 1, and Petitioner relies largely on the same arguments made with respect to claim 1. *See* Ex. 1001, 25:25–51; Pet. 41–45.

a. Preamble

Claim 14 recites “[a] server for exchanging information between one or more wireless devices.” Ex. 1001, 25:25–26. Petitioner relies on its showing made regarding the preamble of claim 1. Pet. 41–42 (citing *id.* at 25–27).

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

For the reasons set forth in § II.E.1.a above, to the extent the preamble is limiting, Perttila supports Petitioner’s contentions.

b. The Receiver Recitation

Claim 14 recites,

⁶ “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)).

a receiver, for receiving second device identifier information from a first wireless device, the second device identifier information having been collected by the first wireless device from a second device, and wherein said second device provides the second device identifier information to the first wireless device using a short range link from the second device to the first wireless device.

Ex. 1001, 25:27–34. In addition to relying on its showing made regarding the receiving recitation of claim 1, Petitioner argues that “[a] POSITA would have understood that [Perttila’s] server . . . has a ‘receiver’ in order to ‘receive’ the second device identifier information from a first wireless device” and “at minimum it would have been obvious to use the well-known component of a receiver to do so in order to advantageously receive the information.” Pet. 42 (citing Ex. 1003 ¶ 147; Ex. 1006 ¶¶ 37–38).

Patent Owner does not contest this aspect of the Petition apart from arguments made regarding claim 1 and discussed above. *See generally* PO Resp.

Perttila discloses that “[w]hen receiving the request from the terminal, the source server 24 extracts the user/terminal ID along with the tag (merchant-media) ID from the request.” Ex. 1006 ¶ 38. Thus, we are persuaded that Perttila’s server contains a receiver.

Accordingly, for the foregoing reasons and those set forth in § II.E.1.b above, Perttila supports Petitioner’s contentions.

c. The Storage Device Recitation

Claim 14 recites “a storage device, for storing the second device identifier information and one or more of an identity or related information concerning an entity or object located in proximity to the second device.” Ex. 1001, 25:35–38. In addition to relying on its showing made regarding

the determining recitation of claim 1, Petitioner maps Perttila's database 50 to the recited storage device and argues that "Perttila discloses that the server stores coupons in 'the database 50' according to 'the user/terminal ID along with the tag (merchant media) ID.'" Pet. 43.

Patent Owner relies on the same interpretation of the Petition advanced regarding claim 1 to map Perttila's billboard to the recited second device and argues that Perttila does not store information concerning any entities or objects located in proximity to the billboard. PO Resp. 37–38. Patent Owner argues that Perttila's database does not "store[] the location of the item to which the electronic coupon is directed, or the proximity of that item to the billboard." *Id.* at 38–39.

Petitioner argues that claim 14 does not require the storage device to store the location of the item to which the electronic coupon is directed. Pet. Reply 9.

We disagree with Patent Owner's arguments for the same reasons set forth in § II.E.1.c above. Perttila discloses that source server 24 uses the merchant ID code to generate an "electronic coupon that corresponds to the content promoted by the billboard." Ex. 1006 ¶ 27. "The merchant-media ID code is used to associate the promotional information with an e-coupon to be provided to the user" *Id.* ¶ 28. The server "extracts the user/terminal ID along with the tag (merchant-media) ID from the request," and "[t]he extracted user/terminal ID and the tag ID are stored by the source server." *Id.* ¶ 38. Perttila explains that during coupon redemption, "the source server 24 . . . checks the database 50 to determine whether the coupon is valid . . . by searching the database for a file with [the] user ID and tag ID of the [coupon] void request" (*id.* ¶ 42), indicating that the merchant ID code

(“tag ID”) and electronic coupon are stored in database 50. We further note that Perttila refers to database 50 as “coupon-database.” *Id.*

Accordingly, for the foregoing reasons and those set forth in § II.E.1.c above, Perttila supports Petitioner’s contentions.

d. The Transmitter Recitation

Claim 14 recites,

a transmitter, for subsequent to the step of receiving the second device identifier information from the first wireless device, delivering information or a service to the first wireless device based at least in part upon (a) the second device identifier and (b) at least one of
(i) feedback ratings relevant to past behavior of an entity associated with either the first wireless device or the second device identifier information;
(ii) information representing a reward for an entity associated with the first device’s participation in a loyalty program; or
(iii) a current step in a multiple step process for an ongoing electronic commerce transaction.

Ex. 1001, 25:39–51. In addition to relying on its showing made regarding the delivering recitation of claim 1, Petitioner argues that “[a] POSITA would have understood that [Perttila’s] server . . . has a ‘transmitter’ in order to transmit the [electronic commerce] application and coupon to the mobile communications device” and “at minimum it would have been obvious to use the well-known component of a transmitter to do so in order to advantageously send the information.” Pet. 45 (citing Ex. 1003 ¶ 153).

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

Perttila discloses that “the source server provides the user terminal with an option to download for example a Java Midlet that corresponds to

the [merchant-information-]request” and that the “Midlet transmission can occur over the same communications link 42 or over another subsequently-established link.” Ex. 1006 ¶ 38. Thus, we are persuaded that Perttila’s server contains a transmitter.

Accordingly, for the foregoing reasons and those set forth in § II.E.1.d above, Perttila supports Petitioner’s contentions.

e. Conclusion

For the foregoing reasons, we conclude that Petitioner has shown, by a preponderance of the evidence, that claim 14 is unpatentable as being anticipated by and obvious over Perttila.

3. Dependent Claims 2 and 15

Claim 2 depends from claim 1 and further recites “wherein the information or service delivered to the first wireless device is associated with the entity or object that is located in proximity to the second device.” Ex. 1001, 23:64–67. Claim 15 depends from claim 14 and contains substantially the same recitation. *Id.* at 25:52–55. As noted above, Petitioner maps Perttila’s electronic coupon to the recited information or service and the billboard and, separately, the billboard content to the recited entity or object. Pet. 29, 31–33; Pet. Reply 7; § II.E.1.c above. Petitioner argues that the electronic coupon is associated with the content promoted by the billboard. Pet. 33–35 (citing Ex. 1006 ¶¶ 27, 29, 37, 39), 45–46.

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

Perttila discloses that its server uses the merchant-media ID code “to associate the promotional information with an e-coupon to be provided to

the user visiting this billboard location.” Ex. 1006 ¶ 28. Thus, the e-coupon is associated with the billboard and its content.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claims 2 and 15, and we conclude that Petitioner has shown by a preponderance of the evidence that these claims are unpatentable as being anticipated by and obvious over Perttila.

4. Dependent Claims 3 and 16

Claim 3 depends from claim 1 and further recites,
wherein the information delivered from the central server to the first wireless device includes at least one of
 advertising information;
 information relating to products or services; and/or
 information related to e-coupons.

Ex. 1001, 24:1–6. Claim 16 depends from claim 14 and contains substantially the same recitation. *Id.* at 25:56–61. As noted above, Petitioner maps Perttila’s electronic coupon to the recited information or service. Pet. 29. Petitioner argues that Perttila’s e-coupon contains e-coupon information in the form of pricing information. *Id.* at 35–36 (citing Ex. 1006 ¶¶ 25, 34), 46.

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

Perttila’s e-coupon, which may “involve . . . pricing information for a particular manufacturer, product, service, event, etc.,” is information related to e-coupons. *See* Ex. 1006 ¶ 25.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claims 3 and 16, and

we conclude that Petitioner has shown by a preponderance of the evidence that these claims are unpatentable as being anticipated by and obvious over Perttila.

5. Dependent Claims 4 and 17

Claim 4 depends from claim 3 and further recites,

wherein the information delivered from the central server to the first wireless device is information relating to e-coupons, and content of the e-coupons is customized based on at least one of:

an identity of the requesting first device or associated account holder;

other information accessible to the server related to the account holder; and/or

past purchasing practices or previous requests of an account holder.

Ex. 1001, 24:7–16. Claim 17 depends from claim 16 and contains substantially the same recitation. *Id.* at 25:62–26:4. Petitioner argues that Perttila’s server provides a personalized e-coupon based on user profile information. Pet. 36–37 (citing Ex. 1006 ¶¶ 31, 38, 70), 46–47.

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

Perttila discloses that, in embodiments, the first device sends its own ID code (in addition to the merchant-media ID code) to the server, and the server uses the device ID code “to fetch user profile information from the remote server or from another entity in order to provide more personalized offering to the user.” Ex. 1006 ¶ 31.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claims 4 and 17, and we conclude that Petitioner has shown by a preponderance of the evidence

that these claims are unpatentable as being anticipated by and obvious over Perttala.

6. Dependent Claims 5 and 18

Claim 5 depends from claim 1 and further recites, wherein the first wireless device, upon detecting proximity of a second wireless device, further performs the steps of:

- reporting an identifier of the second wireless device to the central server over a second wireless link, the second wireless link being a wide area wireless link, and
- retrieving current content from the central server associated with that device.

Ex. 1001, 24:17–24. Claim 18 depends from claim 14 and contains substantially the same recitation, but additionally recites that the first wireless device comprises a transmitter for reporting the second wireless device identifier to the server. *Id.* at 26:5–12. Petitioner argues that, when Perttala’s first wireless device detects the second device, the first wireless device retrieves a merchant-media ID code from the second device and sends the merchant-media ID code using a transceiver to the server over a wide area wireless link. Pet. 37–40 (citing Ex. 1006 ¶¶ 15–16, 30, 36–38, Fig. 1a), 47–48 (citing Ex. 1006 ¶¶ 9, 64, 71, Fig. 4). Petitioner argues that, in response, the server sends “current ‘coupon-based information’ and an ‘electronic coupon that corresponds to the information conveyed by the merchant-media arrangement’” to the first wireless device. *Id.* at 40–41 (citing Ex. 1006 ¶¶ 11, 15, 25–26, 38).

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

Perttala discloses that, when the user’s mobile device, which may be a cellular telephone, is within proximity of the merchant-media arrangement,

the arrangement transmits a merchant ID code to the mobile device.

Ex. 1006 ¶¶ 37, 64. The mobile device establishes a communication link with the server through a mobile network or the Internet and transmits a merchant-information-request signal to the server. *Id.* ¶ 38. The signal includes the mobile device ID and the merchant ID code. *Id.* The server generates an electronic coupon based on the received merchant ID code and provides the user with an option to download the coupon. *Id.* ¶¶ 28, 37–39.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claims 5 and 18, and we conclude that Petitioner has shown by a preponderance of the evidence that these claims are unpatentable as being anticipated by and obvious over Perttila.

7. Dependent Claims 27 and 31

Claim 27 depends from claim 1 and further recites “wherein the further action is additionally based on a history of past detections of device identifier information previously sent to the central server by the first wireless device.” Ex. 1001, 27:11–14. Claim 31 depends from claim 27 and further recites “wherein the history of past detections of a device identifier further comprises: inclusion of the second device identifier information, or an identifier derived from the second device identifier information, on a list associated with an account associated with the first wireless device.” *Id.* at 27:29–34. Petitioner argues that when Perttila’s server generates offerings personalized to the user, it uses (or it would have been obvious to use) stored information regarding previously received merchant-media ID codes.

Pet. 48–51 (citing Ex. 1006 ¶¶ 26–27, 31, 34, 38–39, 42–43). Petitioner relies on the e-coupon validation process as evidencing that the server stores

a history of past detections. *Id.* at 50 (citing Ex. 2006 ¶¶ 42–43); Tr. 117:14–22.

Patent Owner argues that the recited “past detections of device identifier information” refers to the second device identifier information. PO Resp. 40–41. Patent Owner argues that “Perttala does not teach storing previously received merchant-media IDs to ‘personalize’ coupons.” *Id.* at 41. According to Patent Owner, “the only information identified by Perttala as being included in the ‘user profile’ is the user’s ‘ID code’ . . . , ‘email addresses’ for the user, and ‘user demographics.’” *Id.*; *see also* Ex. 2010 ¶ 95.

Petitioner argues that Perttala discloses that “‘the source server 24 extracts the user/terminal ID along with the tag (merchant-media) ID from the request’ and these IDs are then ‘stored by the source server’ in ‘database 50’ (the ‘coupon database’), which also contains ‘the user profile information.’” Pet. Reply 15 (citing Ex. 1006 ¶¶ 38, 42). Petitioner argues that the testimony of its declarant explains why it would have been obvious to use the stored tag ID to personalize electronic coupon offerings. *Id.* at 15–17 (citing Ex. 1003 ¶¶ 88, 167–172).

Patent Owner replies that storing the user ID and the tag ID does not constitute disclosure of personalizing a coupon. PO Sur-reply 23 (citing Ex. 1006 ¶¶ 31, 38; Ex. 2010 ¶¶ 93–95).

We agree with Patent Owner that Perttala does not disclose that its system personalizes e-coupons based on previous detections of merchant-media ID codes. To the contrary, Perttala discloses providing a more personalized offering to the user by using the identification code of the

user's device (i.e., first device identifier information) to retrieve the user's profile information. Ex. 1006 ¶ 31; *see also* Pet. 48–49 (citing same).

However, Petitioner also argues that it would have been obvious to use stored merchant-media ID codes to personalize e-coupon offerings. Pet. 49–50 (citations omitted); Pet. Reply 15–17 (citations omitted). Perttala discloses that, in embodiments, the server uses the user's mobile device ID code to retrieve stored profile information in order to provide personalized offerings to the user. Ex. 1006 ¶ 31. Perttala discloses that, when receiving an information request, the server stores both the mobile device ID and the merchant ID code. *Id.* ¶ 38. Mr. Williams testifies that it would have been obvious to personalize the e-coupons based also on the stored merchant ID codes. Ex. 1003 ¶ 88. “[T]his information . . . reflects the past coupons that the user has received and used,” and personalizing coupons based on this information would “advantageously provide a more targeted advertisement and prevent abuse, for example by a customer collecting too many e-coupons by visiting the merchant-media arrangement too frequently.” *Id.* Mr. Williams opines that using previously stored merchant ID codes to personalize e-coupons “would have advantageously improved Perttala’s e-coupon system by ensuring the user received the most relevant offerings based on the user’s history of receiving and redeeming other coupons.” *Id.* ¶ 170.

We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not rebut. Perttala discloses storing merchant-media ID codes on its server (*e.g.*, Ex. 1006 ¶ 38) and Mr. Williams explains why it would have been obvious to use previously stored merchant-media ID codes when personalizing e-coupon offerings (*e.g.*, Ex. 1003 ¶ 88).

Accordingly, for the foregoing reasons, although we are not persuaded that the subject matter of claims 27 and 31 is anticipated by Perttila, we conclude that Petitioner has shown by a preponderance of the evidence that the subject matter of these claims would have been obvious in view of Perttila and that these claims are, therefore, unpatentable.

8. Dependent Claim 36

Claim 36 depends from claim 1 and further recites “wherein the further action taken by the central server comprises: providing an electronic coupon to the first wireless device from the central server.” Ex. 1001, 27:52–55. Petitioner maps Perttila’s electronic coupon to the recited electronic coupon. Pet. 51.

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

Perttila discloses that its server uses the merchant ID code to generate an “electronic coupon that corresponds to the content promoted by the billboard.” Ex. 1006 ¶ 27. The server provides the user with an option to download the coupon. *Id.* ¶¶ 28, 37–39.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claim 36, and we conclude that Petitioner has shown by a preponderance of the evidence that claim 36 is unpatentable as being anticipated by and obvious over Perttila.

9. Dependent Claims 37 and 43

Claim 37 depends from claim 1 and further recites “wherein the further action taken by the central server comprises: delivering a list of goods to the first wireless device as a step in a process for an electronic

commerce transaction.” Ex. 1001, 27:56–59. Claim 43 depends from claim 1 and similarly recites “wherein the information delivered to the first wireless device comprises: a list of goods or services available for selection from an entity associated with the second device identifier information as part of a step in an electronic commerce transaction.” *Id.* at 28:15–20. Petitioner argues that Perttila’s disclosure of delivering “coupon offerings,” “a restaurant menu,” and “a movie ticket” to the user satisfies the requirements of these claims. Pet. 51–53 (citing Ex. 1006 ¶¶ 26, 39, 44–50), 54–55.

Patent Owner argues that Perttila’s server does not use the merchant-media ID “to make a determination about any entity or object in proximity to the billboard, including ‘a list of goods or services available for selection’ in a store.” PO Resp. 42 (citing Ex. 1006 ¶¶ 28–29, 39; Ex. 2010 ¶¶ 96–98); *see also* PO Sur-Reply 24–26.

Petitioner argues that by retrieving multiple coupon offerings through interaction with multiple tags or beacons, Perttila delivers a list of goods to the first wireless device. Pet. Reply 17–18 (citing Ex. 1003 ¶ 177).

As noted above, Petitioner maps Perttila’s disclosure of “electronic coupon information including various offerings” to the recited “list of goods” and notes that the merchant-media device can be located in a store where the advertised goods are sold. Pet. 51–52 (citing Ex. 1006 ¶¶ 26, 39); *see also* Ex. 1003 ¶ 177. However, neither Petitioner nor its declarant identifies adequately any “list of goods” that Perttila’s remote server delivers to the first wireless device. At best, Petitioner and its declarant describe an iterative process whereby a user interacts with a plurality of tags or beacons in a store to receive multiple electronic coupons. Pet. Reply 17–18;

Ex. 1003 ¶ 177. However, Petitioner fails to explain adequately how delivering coupons one at a time in an iterative process constitutes delivering a list of goods as part of an electronic commerce transaction.

Petitioner also refers to Perttila’s disclosure of delivering a restaurant menu. Pet. 52–53 (citing Ex. 1006 ¶¶ 26); *see also* Ex. 1003 ¶ 177. However, Petitioner and its declarant again fail to explain adequately how sending a restaurant menu constitutes delivering a list of goods as a step in a process for an electronic commerce transaction. Perttila discloses that, in embodiments, the billboard may promote a food product and the user’s interaction with the billboard results in the server sending “a restaurant menu or a recipe involving that particular food or food type.” Ex. 1006 ¶ 26. However, neither Petitioner nor its declarant explain adequately how this constitutes a step in a process for an electronic commerce transaction. Notably, Petitioner and its declarant fail to identify any discussion or suggestion in Perttila of the user interacting with the menu after it has been delivered. Nor do we see any such disclosure in Perttila. Rather, Perttila merely discloses sending a restaurant menu as part of “electronic coupon information”: “In another application, the billboard may be promoting a food product, and the request to the remote server corresponds to a request for receiving electronic coupon information including, for example, a restaurant menu or a recipe involving that particular food or food type.” *Id.* Moreover, we note that Petitioner does not propose to modify Perttila’s system in some manner such that a user could interact with the delivered menu as part of an electronic commerce transaction.

Petitioner also refers to Perttila’s disclosure of delivering a movie ticket. Pet. 52–53 (citing Ex. 1006 ¶¶ 44–50); *see also* Ex. 1003 ¶ 177.

However, Petitioner and its declarant again fail to explain adequately how sending an electronic movie ticket constitutes delivering a list of goods as a step in a process for an electronic commerce transaction. Perttala discloses that its system may be used to purchase a movie ticket that is redeemed “at a time much later than the time when the electronic coupon is received.”

Ex. 1006 ¶¶ 44. Perttala discloses purchasing the movie ticket and later using a menu displayed on the user’s mobile phone to activate and validate the ticket at the theater. *E.g., id.* ¶¶ 46–50. Petitioner fails to explain persuasively how delivering an electronic movie ticket in the manner disclosed by Perttala constitutes delivering a list of goods as a step in a process for an electronic commerce transaction.

Accordingly, for the foregoing reasons, we conclude that Perttala does not support Petitioner’s contentions that claims 37 and 43 are unpatentable over Perttala.

10. Dependent Claim 42

Claim 42 depends from claim 1 and further recites “wherein the further action taken by the central server comprises: performing a verification of authenticity or identity of one more of the entities associated with the first wireless device or the second device as part of a step in an electronic commerce transaction.” Ex. 1001, 28:9–14. Petitioner argues that, as part of the coupon redemption process, Perttala’s server verifies the user’s identity to ensure that the user has rights to use the coupon offering. Pet. 53–54 (citing Ex. 1006 ¶¶ 39, 41–43).

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

Perttila discloses that during coupon redemption, “the source server 24 . . . checks the database 50 to determine whether the coupon is valid . . . by searching the database for a file with [the] user ID and tag ID of the [coupon] void request.” Ex. 1006 ¶ 42. If this file is found, the server deems the coupon to be valid; if the file is not found, the server deems the coupon to be invalid. *Id.* ¶¶ 42–43. This check may take place “before providing the user with the coupon offering to ensure that the user has rights to use the coupon offering.” *Id.* ¶ 43.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claim 42, and we conclude that Petitioner has shown by a preponderance of the evidence that claim 42 is unpatentable as being anticipated by and obvious over Perttila.

11. Dependent Claim 48

Claim 48 depends from claim 1 and further recites “wherein the further action taken by the central server comprises: notifying the first wireless device of the presence of an entity or object associated with or in proximity to the second device.” Ex. 1001, 28:49–53. Petitioner argues that Perttila’s e-coupons correspond to the content promoted by the billboard and are provided to users via beacons located in a store. Pet. 55.

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

Perttila discloses that its server uses the merchant-media ID code “to associate the promotional information with an e-coupon to be provided to the user visiting this billboard location.” Ex. 1006 ¶ 28. Thus, the e-coupon is associated with the billboard and its content and is delivered to the customer when the customer’s device is in proximity to the second device.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claim 48, and we conclude that Petitioner has shown by a preponderance of the evidence that claim 48 is unpatentable as being anticipated by and obvious over Perttila.

12. Dependent Claim 49

Claim 49 depends from claim 1 and further recites “wherein the first wireless device sends the second wireless device identifier to the central server using a wide area cellular technology selected from the group consisting of IS-2000, WCDMA, GPRS, EdGE, LTE, and Wi-Max.” Ex. 1001, 28:54–58. Petitioner argues that Perttila’s mobile communications device sends the information request signal to the server through a cellular network and that “it would have been obvious to use one of the known protocols for the cellular network including EdGE and LTE.” Pet. 55–56 (citing Ex. 1006 ¶ 26; Ex. 1003 ¶ 187).

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

Perttila discloses that the user’s “mobile communications device . . . initiate[s] an electronic commerce application, for example by sending a request over cellular network to a remote server for receiving electronic coupon information.” Ex. 1006 ¶ 26. Petitioner’s declarant testifies that an ordinarily skilled artisan “would have been motivated and found it straightforward to use known mobile network protocols, such as EdGE and LTE.” Ex. 1003 ¶ 187. We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not rebut.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila renders obvious the subject matter of claim 49, and

we conclude that Petitioner has shown by a preponderance of the evidence that claim 49 is unpatentable as being obvious over Perttila.

13. Dependent Claim 52

Claim 52 depends from claim 1 and further recites “wherein the second wireless device is a broadcast only device.” Ex. 1001, 28:66–67. Petitioner argues that Perttila’s beacon device is a broadcast only device. Pet. 56 (citing Ex. 1006 ¶ 37).

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

Perttila discloses that “[a]n RFID tag 38 is co-located at the merchant-media arrangement . . . and is used to communicate a merchant ID code” to the user’s mobile communications device. Ex. 1006 ¶ 37. “As an alternative to using of the RFID tag 38, the merchant ID code can be communicated through an alternative short-range communication link such as a Bluetooth link or an IrDa link provided through a local short-range wireless access point or beacon device at said first location.” *Id.* Petitioner’s declarant testifies that, “[a]s a beacon device, it only broadcasts.” Ex. 1003 ¶ 193. We credit this testimony of Petitioner’s declarant, which Patent Owner’s declarant does not rebut.

Accordingly, for the foregoing reasons, Perttila supports Petitioner’s contentions that Perttila discloses the subject matter of claim 52, and we conclude that Petitioner has shown by a preponderance of the evidence that claim 52 is unpatentable as being anticipated by and obvious over Perttila.

14. Dependent Claim 55

Claim 55 depends from claim 1 and further recites “wherein the further action is based at least in part upon both (a) the second device identifier and (b) the an [sic] identifier associated with the first wireless device or an identifier associated with a user of the first wireless device.” Ex. 1001, 29:10–30:3. Petitioner relies on its arguments advanced for claim 4. Pet. 56–57.

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

As noted above with respect to claim 4, Perttala discloses that, in embodiments, the first device sends its own ID code (in addition to the merchant-media ID code) to the server, and the server uses the device ID code “to fetch user profile information from the remote server or from another entity in order to provide more personalized offering to the user.” Ex. 1006 ¶ 31.

Accordingly, for the foregoing reasons, Perttala supports Petitioner’s contentions that Perttala discloses the subject matter of claim 55, and we conclude that Petitioner has shown by a preponderance of the evidence that claim 55 is unpatentable as being anticipated by and obvious over Perttala.

F. Asserted Obviousness in View of Perttala and Insolia

Petitioner argues that claims 27, 31, 53, and 54 would have been obvious over the combination of Perttala and Insolia. Pet. 57–64. 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 27, 31, 53, and 54 would have been obvious in view of Perttila and Insolia and that Petitioner has set forth reasoning with rational underpinnings why it would have been obvious to combine the teachings of Perttila and Insolia.

1. Dependent Claims 27 and 31

Claim 27 depends from claim 1 and further recites “wherein the further action is additionally based on a history of past detections of device identifier information previously sent to the central server by the first wireless device.” Ex. 1001, 27:11–14. Claim 31 depends from claim 27 and further recites “wherein the history of past detections of a device identifier further comprises: inclusion of the second device identifier information, or an identifier derived from the second device identifier information, on a list associated with an account associated with the first wireless device.” *Id.* at 27:29–34. Petitioner relies on Perttila as described in § II.E above, and relies on Insolia to teach use of a loyalty system and basing the delivery of information from a server to a user’s communication device on a history of the user’s past interaction with the server. Pet. 60–63. Petitioner argues that “Insolia discloses limiting the number of e-coupons or rewards sent from a ‘loyalty server’ to the consumer device to a ‘predefined rate’ based on past detections of the ‘interaction terminal’ by the consumer’s device.” *Id.* at 60–61 (emphasis omitted) (citing Ex. 1008, 11:10–30, 36:19–22); *see also id.* at 63 (presenting similar arguments for claim 31). Petitioner argues that it would have been obvious “to apply Insolia’s teachings of limiting the number of e-coupons a server sends based on the customer’s history” to Perttila’s system. *Id.* at 61 (emphasis omitted) (citing Ex. 1003 ¶ 227).

Petitioner argues that this modification “would have improved Perttila’s e-coupon system because this improves consumer confidence in the system and ensures that businesses are maximizing the impact of the offered promotions.” *Id.* at 59 (emphasis omitted) (citing Ex. 1008, 1:56–60, 1:66–2:3).

Patent Owner faults Petitioner’s reliance on Insolia, arguing that “[t]he cited portions of Insolia do not disclose storing identifie[r]s for the interaction terminals (*e.g.*, vending machines). Consequently, Insolia does not cure this deficiency of Perttila.” PO Resp. 45 (emphasis omitted).

Petitioner argues that the claims do not recite storing identifier information; rather, the claims require taking further action based on a history of past detections of device identifier information. Pet. Reply 23. Petitioner argues that Insolia meets this requirement by “limiting the accrual of rewards to a predefined rate in order to reduce repeated visits *to the same vending or host equipment too frequently.*” *Id.* at 24.

Patent Owner asserts that Petitioner misapprehends the operation of Insolia’s system. PO Sur-reply 26–27. Patent Owner argues that Insolia’s system “need not track, save, or assess interactions or identifiers”; rather, “[i]t need consider only how many rewards a consumer has accrued, and determine whether the consumer is allowed an additional reward based on the allowable ‘predefined rate.’” *Id.* at 27.

As a preliminary matter, and for the reasons discussed above, we do not perceive any deficiencies in Petitioner’s reliance on Perttila alone to anticipate or render obvious claims 27 and 31. As noted above, Perttila’s coupon validation process includes the remote server searching the coupon database for a file with both the user ID and the merchant-media tag ID.

Ex. 1006 ¶ 42. Petitioner’s reliance on Insolia to teach limiting the rate at which electronic coupons are sent to a user incorporates Insolia’s disclosure of filtering the rate at which the loyalty points are awarded to limit the accrual of rewards to a predefined rate in order to “reduce[] repeated visits to the same vending or host equipment too frequently.” Ex. 1008, 36:17–25. Thus, Insolia also discloses maintaining a record of a user’s interactions with a particular piece of equipment.

Additionally, we do not agree with Patent Owner’s interpretation of Insolia. Patent Owner assumes that Insolia is only concerned with how many awards the user receives. PO Sur-reply 27. But Insolia explains that it deters “repeated visits to the same vending or host equipment too frequently.” Ex. 1008, 36:24–25. This at least suggests that it is the number of visits to a particular machine that is of concern, rather than just the number of awards a user has accrued. In order to track how many times a user has interacted with a particular vending machine, the system would have to track interactions with that particular machine.

According, for the foregoing reasons, Perttila and Insolia support Petitioner’s contentions that claims 27 and 31 are unpatentable over the combination of Perttila and Insolia. We further determine that Petitioner has set forth reasoning with rational underpinning for modifying Perttila to limit the rate at which users can obtain e-coupons. *See, e.g.*, Pet. 61.

2. Dependent Claim 53

Claim 53 depends from claim 1 and further recites “wherein the further action by the central server to deliver information or a service to the first wireless device is prevented from being taken based at least in part upon a previous reception of the second wireless device identifier by the first

wireless device.” Ex. 1001, 29:1–5. Petitioner relies on Insolia to teach limiting the rate at which a consumer obtains loyalty rewards. Pet. 63–64.

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

Insolia recognizes that “[o]perators may want to provide the consumer with an experience that breeds consumer loyalty, and consumers may want to be rewarded for their loyalty.” Ex. 1008, 2:1–3. Insolia discloses providing the user with a benefit, such as a loyalty point, for interacting with the system. *Id.* at 9:58–64. The consumer can use the loyalty points to acquire a product for free or at a reduced price. *Id.* at 14:31–35. The rate at which the loyalty points are awarded can be filtered to limit the accrual of rewards to a predefined rate to “reduce[] repeated visits to the same vending or host equipment too frequently.” *Id.* at 36:17–25. As noted above, this tracking would entail tracking interactions with that particular machine.

According, for the foregoing reasons, Perttila and Insolia support Petitioner’s contentions that claim 53 is unpatentable over the combination of Perttila and Insolia.

3. Dependent Claim 54

Claim 54 depends from claim 53 and further recites “wherein the first wireless device sends the second wireless device identifier to the central server using a wide area cellular technology and wherein the second wireless device is a broadcast only device.” Ex. 1001, 29:6–9. Petitioner relies on its showings made for claims 49 and 52. Pet. 64.

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

Claim 54 includes recitations that are substantially the same as those of claims 49 and 52. *Compare* Ex. 1001, 29:6–9, *with id.* at 28:54–58, 28:66–67. For the reasons set forth in §§ II.E.12 and II.E.13 above, Perttila and Insolia support Petitioner’s contentions that claim 54 is unpatentable over the combination of Perttila and Insolia.

III. CONCLUSION⁷

In summary,

Claim(s)	35 U.S.C. §	Reference(s)	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–5, 14–18, 27, 31, 36, 37, 42, 43, 48, 52, 55	102(b)	Perttila	1–5, 14–18, 36, 42, 48, 52, 55	27, 31, 37, 43
1–5, 14–18, 27, 31, 36, 37, 42, 43, 48, 49, 52, 55	103(a)	Perttila	1–5, 14–18, 27, 31, 36, 42, 48, 49, 52, 55	37, 43

⁷ 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).

Claim(s)	35 U.S.C. §	Reference(s)	Claims Shown Unpatentable	Claims Not Shown Unpatentable
27, 31, 53, 54	103(a)	Perttila, Insolia	27, 31, 53, 54	
Overall Outcome			1–5, 14–18, 27, 31, 36, 42, 48, 49, 52–55	37, 43

IV. ORDER

Accordingly, it is

ORDERED that claims 1–5, 14–18, 27, 31, 36, 42, 48, 49, and 52–55 of the '359 patent are determined to be unpatentable;

FURTHER ORDERED that claims 37 and 43 of the '359 patent are not determined to be unpatentable; and

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

IPR2020-00931
Patent 8,090,359 B2

For PETITIONER:

James 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 MORYLLP
lrobinson@bdiplaw.com
ahand@bdiplaw.com