UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,

Petitioner,

v.

SECURE COMMUNICATION TECHNOLOGIES, LLC,

Patent Owner.

Case IPR2025-01182

U.S. Patent No. 11,443,344

PATENT OWNER'S PRELIMINARY RESPONSE

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37 C.F.R. § 42.107 1

37 C.F.R. § 42.108(c) 9

37 C.F.R. § 42.22(a)(2) 9, 14, 22

PATENT OWNER'S EXHIBIT LIST

Exhibit #	Description
2001	Declaration of James Proctor, Jr.
2002	Mr. Proctor's November 2011 Correspondence with Google
2003	LinkedIn Profile – Kyle Enright (Google)
2004	Mr. Proctor's February 2012 Correspondence with Google
2005	LinkedIn Profile – Amar Mehta (Google)
2006	Application Data for Google's U.S. Patent Application No. 13/716,675
2007	December 2012 IDS from U.S. Patent Application No. 13/716,675
2008	Application Data for Google's U.S. Patent Application No. 12/969,291
2009	May 2012 IDS from U.S. Patent Application No. 12/969,291
2010	Application Data for Motorola Mobility's U.S. Patent Application No. 13/738,384
2011	May 2014 Notice of References Cited from U.S. Patent Application No. 13/738,384
2012	Application Data for Google's U.S. Patent Application No. 17/305,266
2013	July 2021 IDS from U.S. Patent Application No. 17/305,266
2014	Complaint from *Secure Commc'n Techs., LLC v. Samsung Elecs. Co., Ltd. et al.*, No. 2:24-cv-484-JRG (E.D. Tex.)
2015	Redacted Version of Samsung's Motion to Transfer Venue from *Secure Commc'n Techs., LLC v. Samsung Elecs. Co., Ltd. et al.*, No. 2:24-cv-484-JRG (E.D. Tex.)
2016	Complaint from *Secure Commc'n Techs., LLC v. Google, LLC*, No. 1:25-cv-1207 (W.D. Tex.)
2017	First Amended Complaint from *Secure Commc'n Techs., LLC v. Google, LLC*, No. 1:25-cv-1207 (W.D. Tex.)
2018	Google blog article concerning Nearby Share
2019	Article from Techcrunch.com concerning Google Fast Pair
2020	Article from Techcrunch.com concerning Android Device Manager (precursor to Google Find Hub)
2021	Google blog article concerning generations of Pixel phones
2022	First Amended Complaint from *Proxicom Wireless, LLC v. Target Corp.*, No. 6:19-cv-01886 (M.D. Fla.)

2023	Complaint from *Proxicom Wireless, LLC v. Macy's, Inc.*, 6:18-cv-00064 (M.D. Fla.)
2024	Excerpts from Gast, "802.11 Wireless Networks: The Definitive Guide", 2nd ed. (2005)
2025	G. Anastasi et al., "Energy conservation in wireless sensor networks: A survey", Ad Hoc Networks 7 (2009) 537–568
2026	Feeney & Nilsson, "Investigation the Energy Consumption of a Wireless Network Interface in an Ad Hoc Networking Environment", Proceedings IEEE INFOCOM 2001. Conference on Computer Communications. Twentieth Annual Joint Conference of the IEEE Computer and Communications Society (Cat. No.01CH37213), Anchorage, AK, USA, 2001, pp. 1548-1557

I. INTRODUCTION

Pursuant to 35 U.S.C. § 313 and 37 C.F.R. § 42.107, Patent Owner Secure Communication Technologies, LLC ("SCT" or "Patent Owner") hereby submits this Preliminary Response to Petitioner Google, LLC's ("Google" or "Petitioner") Petition for *Inter Partes* Review, challenging claims 1-8, 10, 12-16, 18-19, 22-23, and 26-30 of U.S. Patent No. 11,443,344 (the "'344 patent"). As detailed below, Google has failed to demonstrate a reasonable likelihood that any challenged claim is obvious over the combinations of art discussed in the Petition. As a result, and as discussed in Patent Owner's Brief in Support of Discretionary Denial, the Director should exercise discretion to deny institution, *inter alia*, because of the lack of any merit to the Petition. And, even if the Director does not discretionarily deny institution, the Board should deny institution on the merits because Google has failed to demonstrate a reasonable likelihood that it will prevail on any challenged claim.

II. SUMMARY OF PRELIMINARY RESPONSE

Google's Petition is an effort to take combinations of prior art references used by others to invalidate claims of related patents and shoehorn them into the materially different claims of the '344 patent. In doing so, the Petition glosses over key details in the challenged claims which not only differentiate them from the claims previously challenged by others, but from the prior art as well.

Each of Google's grounds relies on a combination of U.S. Patent Application Publication Nos. 2005/0250552 ("Eagle") (Ex. 1005) and 2010/0138481 ("Behrens") (Ex. 1006) and U.S. Patent No. 7,590,086 ("Olkkonen") (Ex. 1007). Eagle and Behrens were at issue in previous IPRs filed by Target on related patents. *See, e.g.*, Exs. 1014, 1016. However, both Eagle and Behrens were considered during prosecution of the '344 patent and are cited on the face of the '344 patent, and the materially different challenged claims of the '344 patent issued over these references. Olkkonen was not at issue in the previous IPRs.

Eagle's matching system (upon which Google relies for most of the challenged claim elements) has a fundamentally different design than the wireless devices described and claimed in the '344 patent. In Eagle's system, user devices rely on traditional Bluetooth inquiry/inquiry response messaging. Mobile devices in Eagle's system forward an inquiry response to a back-end server, which performs application processing using information contained in the inquiry response. In contrast, the '344 patent describes and claims a mobile wireless device that obtains stored information from a server, receives short-range beacon transmissions (containing, among other information, a beacon service identifier (BSI)) from nearby broadcasting devices, and performs certain actions on the wireless device itself. These fundamental differences in design result in several points of differentiation between Eagle and the challenged claims, which are not cured through Google's

attempted combination with Behrens and/or Olkkonen. Notably, Eagle expressly teaches away from the combinations advanced by Google. Neither Google nor its expert address Eagle's express admonition against the proposed modifications, and Google's expert has otherwise failed to articulate viable motivations to combine the references in the manner Google suggests, in violation of Federal Circuit precedent.

Google's reliance on Olkkonen is also misplaced. The challenged claims concern a mobile device that utilizes a BSI to determine whether a beacon transmission relates to the particular wireless beacon service. Google's vague allegations fail to show that Olkkonen's "service class information" fulfills the requirements of a BSI (nor could it), or that Olkkonen's "service class information" is ever used by the mobile device itself to filter incoming messages (it is not). Moreover, Google's proposal to include Olkkonen's service class information in Eagle's traditional Bluetooth inquiry response is flawed, as Olkkonen itself does not disclose including this information in its Bluetooth inquiry response, nor would a POSITA have been motivated to do so.

These and other shortcomings are discussed below. Given these fundamental flaws in the merits of Google's Petition, denial of institution (whether discretionary or on the merits) is warranted.

III. FACTUAL BACKGROUND

A. The '344 Patent

The '344 patent issued in September 2022 from U.S. Patent Application No. 17/366,826, filed in July 2021. The '344 patent claims priority to a series of continuation applications, as well as to U.S. Provisional Patent Application Nos. 61/095,001 and 61/095,359, both filed in September 2008. In its Petition, Google does not dispute that the challenged claims of the '344 patent are entitled to that priority date. The '344 patent issued over hundreds of cited references considered by the Examiner, including Eagle and Behrens.

The claims of the '344 patent were invented by Messrs. James Arthur Proctor, III and James Arthur Proctor, Jr., a father and son who are the co-founders of Proxicom Wireless, LLC ("Proxicom"). Mr. James A. Proctor, III holds a B.S.E.E. from the University of Florida and an M.S.E.E. from the Florida Institute of Technology. He is a former faculty member at the Florida Institute of Technology where he taught graduate courses in electrical engineering. Mr. James A. Proctor, III has forty years of experience in engineering and management roles at Harris Corporation in Melbourne, Florida working with communications systems. Mr. James A. Proctor, Jr., holds a B.S.E.E. from the University of Florida and an M.S.E.E. from the Georgia Institute of Technology. Mr. Proctor, Jr. is an accomplished technology executive and serial entrepreneur in the wireless and

communications field, having contributed to the startup, growth, operation, and exits of a number of programs and companies.

One inspiration for the inventions taught and claimed in the patents-in-suit was the difficulty that Mr. Proctor, Jr. experienced in sharing files securely. In 2008, Mr. Proctor, Jr. realized that devices such as laptops that had WiFi and Bluetooth capabilities for short-range communication could not communicate securely with other similar devices, or exchange documents using those short-range communication channels. In fact, users could be tracked by third parties with the then-existing peer-to-peer technology. A third party could copy the identifier associated with a user or user's device and misuse it. Accordingly, there was a need for technology that could facilitate secure communications between mobile devices using short-range communication technologies.

All of the challenged claims have features that distinguish them from the references cited by Google: (1) a beacon transmission that includes three elements, *i.e.*, a MAC address, a unique identifier, and a BSI; (2) the mobile wireless device's use of the BSI to filter short range transmissions that relate to the particular wireless beacon service; and (3) taking further action by the mobile wireless device itself (rather than a back-end server) related to the stored information if the particular unique identifier is present.

B. Prior Litigation and IPR Proceedings Concerning Patents Related to the '344 Patent

In *Proxicom Wireless, LLC v. Target Corp.*, No. 6:19-cv-01886 (M.D. Fla.) and *Proxicom Wireless, LLC v. Macy's, Inc.*, 6:18-cv-00064 (M.D. Fla.), Proxicom (SCT's predecessor in interest) accused Target Corporation ("Target") and Macy's, Inc. of infringing different patents related to the '344 patent. Exs. 2022-2023. Specifically, Proxicom accused Target and Macy's mobile app features of infringement, including features for locating items on shopping lists and personalized in-store offers. Exs. 2022-2023. Target filed IPR petitions against the patents asserted against it. *See generally* Exs. 1014-1033; *see also* Pet. 3. Pleadings from those IPR petitions and the district court litigations were considered during the prosecution of the application leading to the '344 patent. *See* Ex. 1001.

In July 2024, SCT filed a complaint against Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. (collectively, "Samsung"), accusing Samsung of infringing the '344 patent, as well as the two patents Google challenged in IPR2025-01181 and-01183. Ex. 2014. In August 2025, SCT filed a complaint against Google, which SCT amended on September 8, 2025. Ex. 2017. Unlike the Target and Macy's litigations involving features for locating items on shopping lists and personalized in-store offers, SCT's infringement allegations against Samsung concerned Find My Mobile (which allows users to locate their devices), Quick Share (which allows users to share files), and Fast Pair (which allows users to wirelessly

pair devices). Ex. 2014 at 7-8. Similarly, SCT's allegations against Google concern Find Hub (which allows users to locate their devices), Quick Share/Nearby Share (which allows users to share files), and Fast Pair (which allows users to wirelessly pair devices). Ex. 2017 at 7-8.

Not only do the infringement allegations in the Samsung and Google litigations differ from the Target and Macy's litigations, but so does the language of the asserted claims. For example, the challenged claims of the '344 patent recite using "beacon transmissions" that include a "beacon service identifier" and performing further actions on the wireless device—elements not at issue in the Target and Macy's matters. *Compare* Ex. 1001 *with* Exs. 1014-1033.

C. Background Concerning the Art in Google's Petition

Each of the grounds in Google's Petition relies on a combination of Eagle, Behrens, and Olkkonen.

Eagle discloses a system that relies on traditional Bluetooth general inquiry/inquiry response messaging where, when a new user's device comes near a user's device, the devices discover one another and exchange information, before sending information a back-end server for processing. The back-end server compares the two user's profiles, and if they are a "match," then the server causes the user's device to display an alert. Ex. 1005 at, *e.g.*, [0019]-[0021]. As detailed below, Eagle emphatically teaches that this matching determination is to be

performed on the back-end server and not the user's mobile device, citing numerous benefits to processing on the server (*e.g.*, "easi[er] updat[ing]," "more sophisticated comparison and notification functions using more complete data," "better performance," and "improved privacy protection") and problems avoided by avoiding processing on the mobile device (*e.g.*, "the computational burden and consequent power consumption to which the battery powered portable devices are subjected" and "conserv[ing] memory space"). *Id.*, [0009], [0024].

Behrens generally describes a system that allows users to get in contact with other users nearby. Ex. 1006 at, *e.g.*, [0002]-[0010]. In the system described in Behrens, the users' devices transmit messages with one or more unique identifiers ("UIDs"), and the received UIDs are logged and sent to a server. *Id.*, [0053], [0074]. Google primarily relies on Behrens for its disclosure of UIDs, including multiple or changing UIDs. *See* Pet. 12-13.

Olkkonen generally describes the use of ad hoc networks between devices (*e.g.*, piconets in the case of Bluetooth communications). Ex. 1007, Abstract. Google relies on Olkkonen for the proposed modification of "us[ing] Olkkonen's service class information to identify Eagle's social introduction application . . . such that Identified Devices identifying Eagle's service are included in notifications to the server rather than non-participating devices." Pet. 22. Olkkonen's information "characterizing the ad hoc network" or "identifying the running application" may be

displayed on a mobile device menu and selected by a user. Pet. 13-14 (citing Ex. 1007, Fig. 1) (highlighting in Petition).

IV. LEGAL STANDARDS

The Board may only institute an *inter partes* review where "the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a); 37 C.F.R. § 42.108(c). Petitioner bears the burden of showing that this statutory threshold has been met. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) ("[T]he Petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable."); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, CBM2012-00003, Paper 8 at 14-15 (PTAB Oct. 25, 2012) (representative) ("[I]t is the responsibility of the Petitioner to clearly articulate [the proposed combination]."); 37 C.F.R. §§ 42.22(a)(2), 42.104(b)(4).

The Petition relies solely on obviousness, and more specifically upon combinations of two or more references for each ground. Section 103 of the Patent Act provides that "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter ***as a whole*** would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §

103(a) (emphasis added). If a single element of a claim is absent from the prior art, the claim cannot be considered obvious. *See CFMT, Inc. v. YieldUp Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) ("[O]bviousness requires a suggestion of all limitations in a claim.") (citing *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974)); *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993) (reversing obviousness rejection where prior art did not teach or suggest all claim limitations); *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 15 at 15 (PTAB Jan. 9, 2013) (refusing to institute an IPR under 35 U.S.C. § 103 where prior art did not disclose all claim limitations).

The conclusion of obviousness based on a combination of references must be supported with explicit analysis of a reason to combine those references. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The Federal Circuit has stated that such reasons must be more than "mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); *accord Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 (Fed. Cir. 2008) (agreeing with the district court's reasoning that "some kind of motivation must be shown from some source, so that the jury can understand why a person of ordinary skill would have thought of either combining two or more references or modifying one to achieve the patented method"); s*ee also LG Elecs., Inc. v. Cellular Commc'ns Equip.*

LLC, IPR2016-00197, Paper 7 at 7-11 (April 29, 2016) (faulting a petition's obviousness analysis for lack of sufficient articulated reasons with rational underpinnings for modifying references to achieve particular elements required in the claims).

V. GOOGLE HAS FAILED TO DEMONSTRATE A REASONABLE LIKELIHOOD THAT IT WILL PREVAIL ON ANY CHALLENGED CLAIM

As discussed below, Google's proposed combination of Eagle, Behrens, and Olkkonen (in the lone ground presented in its Petition) fails to disclose or render obvious several elements of the challenged claims, and there is no motivation to combine those references in the manner Google alleges. There is thus no reasonable likelihood that Google will prevail on any challenged claim.

A. Eagle Does Not Disclose "Beacon Transmissions"

Independent claims 1, 29, and 30 each require that the wireless device "receiv[e]" at least one "plurality of beacon transmissions." The claimed "beacon transmissions" include "a MAC address," "a unique identifier," and a BSI. Ex. 1001, claims 1, 29, and 30.

Google alleges that Eagle's disclosure of traditional Bluetooth inquiry response messages satisfies the claimed "beacon transmissions" element. Pet. 29-30 (mapping the beacon transmission to "inquiry responses containing identifying information"); 32-37 (mapping the claimed beacon transmission requirements of a

MAC address, unique identifier, and BSI to the "inquiry response"). But, Bluetooth inquiry responses are not beacon transmissions. Eagle itself does not describe the Bluetooth inquiry response messages as "beacon transmissions." And critically, there can be no dispute that Eagle's inquiry response messages are *solicited*; they are only sent by a device *responding* to a Bluetooth inquiry message. Ex. 1005, [0033]-[0038]; *see also* Ex. 1008 at 245 ("An inquiry response packet is transmitted from the slave to the master after the slave has received an inquiry message."); *see also* Ex. 2024 at 109 (describing beacon frames in 802.11 at being "transmitted at regular intervals" and not in response to any other message), 110 (describing probe responses in 802.11 as being sent in response to probe requests). Google never explains why a POSITA would consider Eagle's traditional Bluetooth inquiry response messages to be "beacon transmissions." Nor could it.

It is commonly understood that beacon transmissions are broadcast to all devices within range of the transmitting device, and that beacon transmissions are sent without regard to any inquiry or other prior communication. For example, in Bluetooth 2.1, parked slaves use a "beacon train" in which beacon messages are transmitted at a given interval (*i.e.*, the "beacon interval"), making clear that their

transmission does not depend on first receiving an inquiry or other message.[1] Ex. 1008 at 120. Likewise, in the IEEE 802.11 specification, beacon frames are transmitted by access points at a given interval. Ex. 2024 at 109 ("Beacon frames . . . are transmitted at regular intervals to allow mobile stations to find and identify a network."); *see also id.* at 88 (discussing beacon interval). And, in ad hoc 802.11 networks (an example specifically discussed in the '344 patent specification), beacons are transmitted by members of the ad hoc network without any previous inquiry or other message being received. Ex. 1001, 8:12-54, Fig. 6; Ex. 2024 at 198.

Notably, Google has made no effort to explain how or why Eagle's inquiry response message would satisfy a POSITA's common understanding of a "beacon transmission," a term that Google does not seek to construe. As such, Google has not discharged its burden. *See Liberty Mut.*, Paper 8 at 14-15 ("[W]e address only

[1] Similarly, Bluetooth inquiry messages are transmitted to devices within range, without first receiving any kind of message or other prerequisite. *See* Ex. 1005, [0034]-[0035] (noting that inquiry messages are received by "devices that are in range with regard to the initiator"). However, Google does not rely on Bluetooth inquiry messages as meeting the "beacon transmission" claim element, and Google makes no attempt to map the claimed beacon transmission elements (*i.e.*, a MAC address, unique identifier, and BSI) to the contents of the inquiry message.

the basis, rationale, and reasoning put forth by the Petitioner and resolve all vagueness and ambiguity in Petitioner's arguments against the Petitioner. . . . [I]t is the responsibility of the Petitioner to clearly articulate [the proposed combination]."); 37 C.F.R. §§ 42.22(a)(2), 42.104(b)(4) ("The Board may exclude or give no weight to the evidence where a party has failed to state its relevance.").

Google's Petition makes a passing reference to Eagle's disclosure that "Bluetooth transceivers . . . can be used as beacons to identify a device to other nearby devices." Pet. 30 (citing Ex. 1005 at [0008]). This paragraph of Eagle does not help Google, because it merely characterize the wireless ***devices*** in its system as "beacons" (Ex. 1005, [0008]), but does not characterize any of the traditional Bluetooth ***messages*** it utilizes as "beacons" or "beacon transmissions." To the extent any of the traditional Bluetooth messages cited by Eagle could plausibly be characterized as a "beacon transmission," it would be the general inquiry message and not the inquiry response message. This is because the general inquiry message is transmitted to all devices within range and is unsolicited. Ex. 1005 at [0034] ("The general inquiry is intended to be used by devices that need to discovery devices that are made discoverable continuously or for no specific condition."). In contrast, the inquiry response message relied on by Google is a solicited response to the inquiry. Ex. 1005, [0034]-[0035]. As such, the inquiry response cannot be considered a beacon transmission.

Nor is the distinction between beacon transmissions and inquiry responses (other types of solicited transmissions) without a difference. A POSITA would have known that beacon transmissions must be relatively small to avoid rapidly consuming the resources of the broadcasting device and devices in range of the broadcasting device that receive the transmissions. *See, e.g.*, Ex. 2024 at 193-98 (discussing buffering of "multicast and broadcast frames" at "DTIM Period[s]" as part of power management); Ex. 2025 at 538 ("[G]enerally data transmission is very expensive in terms of energy consumption."); Ex. 2026 at 1550 (noting that the energy "costs of receiving and discarding are multiplied by the number of hosts which receive or discard the traffic"). Thus, even assuming *arguendo* that Eagle's inquiry responses were beacon transmissions (or were modified to be beacon transmissions), a POSITA would not have been motivated to modify Eagle's inquiry response message to include the all of the elements required by the claimed beacon transmission (*i.e.*, a MAC address, a unique identifier, and a BSI).[2] Neither Google

[2] Google does not argue that collateral estoppel applies to whether Eagle discloses "beacon transmissions." Instead, Google only argues that collateral estoppel applies "regarding receiving transmissions from a second wireless device via short-range protocol." Pet. 29. Nor could Google argue that collateral estoppel applies as to this issue, because the claims at issue in the IPRs Google relies on did not recite "beacon

nor its expert explain why a POSITA would have been motivated to modify the inquiry response messages in this manner, and neither considers the ramifications of packing the alleged beacon transmission with additional information (*e.g.*, consumption of additional resources). *See, e.g.*, *TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019) ("[A] conclusory assertion with no explanation is inadequate to support a finding that there would have been a motivation to combine."); *In re Kahn*, 441 F.3d at 988 (requiring "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"); *see also Innogenetics*, 512 F.3d at 1374 (agreeing with the district court's reasoning that "some kind of motivation must be shown from some source, so that the jury can understand why a person of ordinary skill would have thought of either combining two or more references or modifying one to achieve the patented method"); *LG Elecs.*, Paper 7 at 7-11 (faulting a petition's obviousness analysis for lack of

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transmissions," nor did the parties litigate (or the PTAB decide) whether Eagle discloses beacon transmissions. *See* Exs. 1014, 1016; *see also, e.g.*, *Comair Rotron, Inc. v. Nippon Densan Corp.*, 49 F.3d 1535, 1537 (Fed. Cir. 1995) (noting that collateral estoppel only applies when, *inter alia*, "the issue was actually litigated" and "the identical issue was decided in the first action").

sufficient articulated reasons with rational underpinnings for modifying references to achieve particular elements required in the claims).

Indeed, in other parts of the Petition, Google cites to conserving "communication processing" resources of the mobile wireless device as a motivation to move Eagle's back-end processing from the server to the mobile device. Pet. 21 (citing Ex. 1003, ¶ 110). Modifying Eagle's inquiry response to include additional fields or information to satisfy the requirements of the claimed beacon transmission would run counter to this goal, as increasing the contents of the beacon transmission would increase consumption of "communications processing" resources. Google does not address this inconsistency or analyze why including additional elements in Eagle's inquiry response message would not violate its expert's stated goal of reducing "communication processing" by the mobile wireless device.

For these reasons, Google has failed to demonstrate that Eagle (which Google relies exclusively on for this element) discloses the claimed "beacon transmissions."

B. The Combination of Eagle and Olkkonen Does Not Disclose a BSI or that the Mobile Device Uses the BSI to Filter the Beacon Transmissions Associated with the Wireless Beacon Service.

Independent claims 1, 29, and 30 each require that the claimed beacon transmissions include, *inter alia*, a BSI. The claimed BSI indicates that the beacon transmission is associated with a wireless beacon service. *See* claim 1 (reciting "filtering the beacon transmissions which include a particular beacon service

identifier indicating that a particular received beacon transmission is associated with a particular wireless beacon service"), claim 29 (reciting "filtering the beacon transmissions which include a particular beacon service identifier indicating that a particular received beacon transmission is associated with the particular wireless beacon service" and "filtering the beacon transmissions which include the same particular beacon service identifier indicating that a particular received beacon transmission is associated with the same particular wireless beacon service"), claim 30 (reciting "filtering the beacon transmissions which include a particular beacon service identifier indicating that a particular received beacon transmission is associated with the a particular wireless beacon service").

Additionally, independent claims 1, 29, and 30 require that the wireless device (and not a server or other device) perform the filtering using the BSI. Specifically, claim 1 recites receiving both the "plurality of beacon transmissions" and the "stored information" "at the wireless device" and then recites further steps ("causing selection . . ." and "taking first further action . . .") referring back to that received information. Claim 29 recites a "mobile wireless device" with "one or more processors" and "one or more memory devices coupled to the one or more processors, the one or more non-transitory memory devices storing a set of instructions that when executed by the one or more processors cause the one or more processors to perform [the claimed operations]." Similarly, claim 30 recites a

"computer program product for installation in a non-transitory medium in a wireless device, the computer program product comprising computer program instructions that, when executed by one or more processors in the wireless device, cause the wireless device to [perform the claimed operations." In claims 1, 29, and 30, the mobile device processing does not proceed to the "further action" steps unless it determines that the filtered beacon transmissions "include a particular [BSI] indicating that a particular received beacon transmission is associated with the particular wireless beacon service." As discussed below, Google's theory ignores these explicitly claimed requirements.

i. Google Does Not Identify With Any Particularity What Information from Olkkonen is the Alleged BSI.

Google alleges that it would have been obvious to modify Eagle's inquiry response message (the alleged "beacon transmission") to include (in view of Olkkonen) "service class information [that] identifies Eagle's social introduction system" (the alleged BSI). Pet. 36 ("Eagle-Olkkonen teaches each beacon transmission comprising *(c) a beacon service identifier* (*e.g.*, service class information)*, wherein the beacon service identifier of each respective beacon transmission identifies a wireless beacon service* (*e.g.*, service class information identifies Eagle's social introduction system)"). However, page 36 of the Petition does not specifically identify Eagle's "service class information." There, the Petition vaguely states that "[s]ervice class information includes information that

Identified Devices access from their service registries 'characterizing the ad hoc network' of which it is a member. This information includes service class information identifying the running application programs."[3] *Id*. (citation omitted).

While the claim mapping on page 36 of the Petition does not give an example of what Google means by information "characterizing the ad hoc network" or "identifying the running application," Google cross-references an earlier portion of the Petition (§ VI.D.2, at pp. 20-25). There, Google alleges that "service class information (which may include service 'attributes') describes and identifies programs running in ad hoc networks (*e.g.*, a network baseball game)." Pet. 21 (citing Ex. 1005, Fig. 5, 30:22-28). Elsewhere in the Petition, Google indicates that

[3] Olkkonen's SDP service registries are shown in Figs. 5, 5A, 5B, 5C, and 5D. Ex. 1005, 10:8-18. Google does not identify any particular information stored in these registries as satisfying the claimed BSI. Notably, as set forth below, the information stored in these registries must be queried by another device sending a "SDP service search attribute request packet," to which the device receiving this query responds with a "response to SDP service search attribute packet." Ex. 1005, 25:21-29:65 (describing Figs. 4E – 4L). Contrary to Google's allegations, nothing in Olkkonen suggests including the information stored in these registries in a Bluetooth inquiry response message.

devices in Olkkonen's ad hoc networks "respond[]" to "inquiry signals" "with information characterizing the ad hoc network," and those responses "are compiled into a discovery menu listing those characteristics 'in accordance with the type of characteristics of interest to the user.'" Pet. 14 (citing Ex. 1005, 6:29-38). The Petition includes Figure 1 from Olkkonen and highlights it to demonstrate "information characterizing the ad hoc network" that a user may select from a menu:

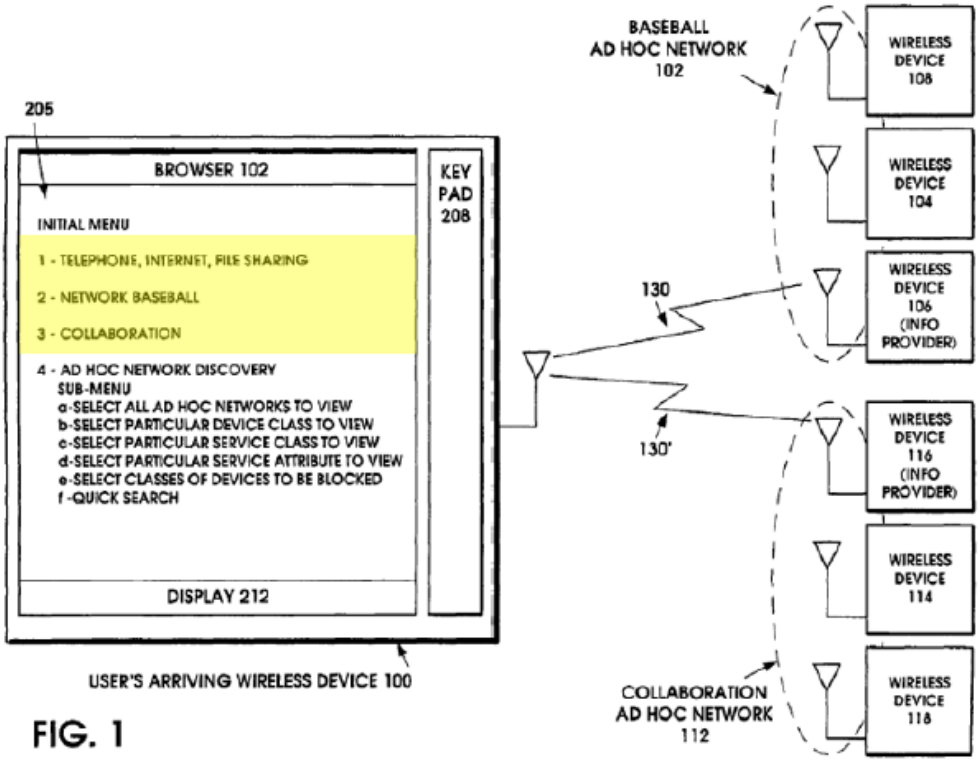


FIG. 1

Id. As best can be gleaned from the Petition's vague allegations, examples of Okkonen's "service class information" may be "telephone, internet, file sharing," "network baseball," and "collaboration" as shown in Olkkonen's Fig. 1.

Neither SCT nor the Board should have to strain to interpret Google's vague allegations or guess as to what specific information Google alleges to be the claimed

BSI. Indeed, "it is the responsibility of the Petitioner to clearly articulate [the proposed combination]." *Liberty Mut.*, Paper 8 at 14-15; 37 C.F.R. §§ 42.22(a)(2), 42.104(b)(4). Because Google failed to identify specific information from Olkkonen that allegedly discloses the claimed BSI, and failed to explain why this information satisfies the challenged claims' BSI, Google has not met its burden.

ii. Google Has Not Shown How Any Alleged BSI in Olkkonen Is Used to Filter Beacon Transmissions Associated with a Wireless Beacon Service.

As important, Google failed to articulate how Eagle's information "characterizing the ad hoc network" or "identifying the running application" could function as a BSI within the context of the challenged claims. As previously stated, a mobile wireless device of the challenged claims uses the BSI to filter the beacon transmissions associated with a wireless beacon service. In other words, the claimed mobile device uses the BSI in its processing. Google acknowledges this requirement. *See* Pet. 36 (Google alleging that "it would have been obvious for an Identified Device to respond to inquiries from a Requester Device with beacon service identifiers such as service class information *for the purpose of filtering UIDs*.").

Notwithstanding this statement, Google does not explain how Olkkonen's information "characterizing the ad hoc network" or "identifying the running application" could function as an "identifier" in the context of challenged claims, or

how the mobile wireless device could use this information to determine which beacon transmissions are associated with the proximity beacon service. *See* Pet. 36, 40. For example, in the context of the challenged claims, an ad hoc name given to a network or program (such as "network baseball" (*see* Ex. 1005, Fig. 1)) could not function as a BSI. For it to do so, the mobile wireless device would need advanced knowledge of the name given to the network or program, such that it could determine whether a beacon transmission that includes, *e.g.*, service class information for "network baseball" is associated with a particular wireless beacon service. Nothing in Olkkonen suggests that the wireless devices have that capability, nor does Google allege any modification that would allow the devices to do so.

Also, as Google admits, the ad hoc name in Olkkonen is used to populate a menu that allows for ***user selection***. While a user could select, *e.g.*, "network baseball" from the menu based on his or her interests, Olkkonen does not disclose ***its mobile device*** using this information to process incoming beacon transmissions to determine which ones are associated with a particular proximity beacon service,

as required by the claims.[4] For this additional reason, Google has not met its burden.[5]

iii. A POSITA Would Not Have Been Motivated to Include "Service Class Information" in an Inquiry Response.

In addition to the defects in Google's theory discussed above, Google's theory proposes to modify Eagle's Bluetooth inquiry response message to include Olkkonen's service class information. This combination is premised on Google's erroneous claim that Olkkonen discloses a Bluetooth inquiry response that includes service class information. Pet. 21-22 (alleging, *inter alia*, that "[t]his service identification information is received in Bluetooth inquiry responses"). Olkkonen does not disclose a Bluetooth inquiry response message that includes "service identification information." Ex. 1005, Fig. 4B (depicting "Bluetooth FHS Packet Structure for an ***Inquiry Response Packet*** Sent by Ad Hoc Network Information Provider"). While this inquiry response message includes "class of device" field 522, it does not disclose a field for service class information. *Id.* This is consistent with Google's other evidence, showing Bluetooth inquiry responses only include

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[4] The Petition makes passing reference to Olkkonen's "device classes" (Pet. 14), such as "printers" or "fax machines" (Ex. 1007, 11:33-42). A device class cannot be a BSI, as it does not "identif[y] a wireless beacon service."

[5] Google's expert's declaration is likewise deficient. *See* Ex. 1003, ¶¶ 141-145.

high-level "major service classes," *e.g.*, networking, audio, or telephony, that are identified by particular bits in the inquiry response. Ex. 1009 at 2. This is also consistent with Eagle, which acknowledges that service class information is not included in inquiry responses. Ex. 1005, [0034]-[0035].

Olkkonen's "service class information" is instead contained in the "SDP service registries" of devices in the piconet and disclosed later in the messaging sequence. Ex. 1007 at, *e.g.*, 13:40-43 ("the ad hoc network information provider 106 response over link 130 with information accessed from its SDP service registry characterizing the ad hoc network"). Olkkonen's SDP service registries are shown in Figs. 5-5D. Ex. 1005, 10:8-18. The messaging requesting SDP service information, and the response messaging disclosing the SDP service information, are shown in Figs. 4E-4L. Ex. 1005, Figs. 4E, 4G, 4I, 4K (showing "SDP service search attribute request[s]" in "SDP service search attribute request packet[s]"), Figs. 4F, 4H, 4J, 4L (showing "SDP service search attribute response[s]" in respective "response[s] to SDP service search attribute request[s]"). As the sequence of Figure 4A-4L (and their accompanying disclosure) shows, this messaging takes place after the inquiry response. *See id.*, Figs. 4A-4L; 26:34-28:67.

Olkkonen's failure to disclose a Bluetooth inquiry response message containing service class information is fatal to Google's proposed combination. Indeed, the entire premise of Petitioner including Olkkonen in the combination is

that it discloses a Bluetooth inquiry response message that includes "service class information." Pet. 21-22. And because Olkkonen discloses service class information being disclosed in messaging subsequent to the inquiry response message, it actually teaches away from the proposed modification of including service class information in the inquiry response message. *Ricoh Co., Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325, 1332 (Fed. Cir. 2008) ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.") (quoting *In re Kahn*, 441 F.3d at 990); *see also, e.g.*, *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016) (finding no motivation to modify the prior art where doing so "would destroy the basic objective" of the prior art). Google has not articulated any reason a POSITA would have been motivated to deviate from these Bluetooth standard communication sequences as part of its proposed combination.

iv. Eagle Teaches Away From Performing Filtering or Other Processing on the Mobile Wireless Device.

Claim 1 recites "causing selection of one or more of the unique identifiers from the first plurality of beacon transmissions, by filtering the beacon transmissions which include a particular beacon service identifier." Similarly, claims 29 and 30 recite "[select/selecting] one or more of the unique identifiers from the [first/second] plurality of beacon transmissions, by filtering the beacon transmissions which

include [a/the same] particular beacon service identifier." Google alleges that this element is met by the combination of Eagle and Olkkonen, through filtering the inquiry responses received from the Identified Devices. Pet. 40-41. Eagle does not teach such filtering, but Google alleges that "Olkkonen teaches to filter and select only the UIDs of Identified Devices that identify Eagle's social introduction system." *Id.* at 41.

Even setting aside that, as discussed above, Olkkonen's "service class information" is not a BSI, Eagle teaches away from performing such filtering on the mobile wireless devices. Eagle requires the matching and other processing to be performed on the back-end server and explicitly and unequivocally teaches away from extensive processing being performed on the mobile device, setting forth a list of advantages of using a server for this processing and several disadvantages of using the mobile device for this processing:

> The storage of profile data, the performance of matching functions, message transmission, and other functions at a ***shared central server*** offers several advantages over systems which rely on the portable devices themselves for storing and sharing information. ***The performance of functions using a centralized infrastructure reduces the computational burden and consequent power consumption to which the battery powered portable devices are subjected.*** The centralized structure can be

> more easily updated and is capable of performing more sophisticated comparison and notification functions using more complete data. ***The robust capabilities of web servers, applications servers and database servers may be used to advantage to provide better performance from the individual devices, as well as functions such as improved privacy protection, profile editing, report generation, data analysis and system management functions not possible using the limited capabilities of the portable devices alone***.

Ex. 1005, [0009]. Eagle thus teaches away from the modification Google suggests. *Ricoh*, 550 F.3d at 1332 ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant."); *see also Trivascular*, 812 F.3d at 1068 (finding no motivation to modify the prior art where doing so "would destroy the basic objective" of the prior art).

C. The Combination of Eagle and Behrens Does Not Disclose or Render Obvious Receiving "Stored Information" or Taking Further Action(s) "Related to the Stored Information"

Independent claims 1 and 29 each require that the claimed wireless device receive "stored information" from a server. Specifically, claim 1 recites "receiving, at the wireless device via a second wireless protocol, stored information from one or more servers." Claim 29 recites "receiving from one or more servers, using the

second wireless protocol, stored information related to a entity or object associated with a first unique identifier." Additionally, claim 30 recites "process stored information transferred from one or more servers to the mobile wireless device via a second wireless protocol, wherein the stored information relates to an entity or object associated with a first unique identifier, and wherein the second wireless protocol is different from the Bluetooth wireless protocol." After receiving "stored information" from a server, claims 1, 29, and 30 each require performing one or more "further action relating to the stored information."

Google alleges that the claimed "further action" is met by three distinct actions, *i.e.*, "notifying the server, receiving profile information, and displaying received profile information." Pet. 42. None of these actions meet the requirements of the challenged claims.

First, Google's theory concerning "notifying the server" is contradicted by the claim language. Google alleges that the claimed "stored information" is the "stored profile information" that the Requester Device receives ***after*** it "notifies the server of an Identified Device" and "the server compares the Requester Device's profile information with the Identified Device's profile information" and "determine[s] [that] they satisfy matching criteria." Pet. 37-38. Thus, Google's alleged "further action" of "notifying the server" is not a "further" action at all, but one that was already performed before the "further action" step.

Second, Google's theory concerning "receiving profile information" reads the "further action" requirement out of the claims. Receiving profile information is precisely what Google alleges meets the claimed requirement of receiving stored information from the server. Pet. 38. Thus, here too, the action of "receiving profile information" is not a "further" action at all, because it was already performed before the "further action" step (and, indeed, is alleged to meet that earlier step).

Third, Google's theory concerning "displaying received profile information" fails to meet the claims' requirement that the "further action" only be performed "if the [first/second] unique identifier is present among the selected one or more unique identifiers." Google alleges that, according to Eagle, "[t]he Requester Device receives the profile data and displays it" and that "[t]he user of the Requester Device is thereby alerted to the presence of users sharing similar personal interests, for example." Pet. 42. Thus, whether the Requester Device "display[s] received profile information" depends on whether the back-end server determines that the "Requester Device's profile information" and the "Identified Device's profile information" and "satisfy matching criteria." Pet. 38. That is not the same as determining "if the [first/second] unique identifier is present among the selected one or more unique identifiers." According to Google's theory (and setting aside the problems with it, discussed elsewhere herein), that determination is made by "filtering received

transmissions that include service class and/or attribute information relating to Eagle's social introduction system." Pet. 40.

D. The Combination of Eagle and Olkkonen Does Not Disclose Determining that a Beacon Transmission Includes a Proximity Beacon Service Identifier

Independent claims 1, 29, and 30 each require that the claimed wireless device filter the beacon transmissions that includes a BSI. As discussed above, Eagle does not disclose beacon transmissions, and the combination of Eagle and Olkkonen does not disclose a BSI. Thus, the combination of Eagle and Olkkonen does not disclose the wireless device filtering beacon transmissions that include a BSI for the same reasons.

E. Remaining Challenged Claims

The remaining challenged claims all depend from claim 1, and Google has thus failed to show a reasonable likelihood that it will prevail as to any of those remaining challenged claims for the same reasons discussed above with respect to claim 1.

VI. CONCLUSION

For at least the reasons above and those in Patent Owner's Brief in Support of Discretionary Denial, the Director should exercise discretion to deny institution, *inter alia*, because of the lack of any merit to the Petition. And, even if the Director does not discretionarily deny institution, the Board should deny institution on the

merits, because Google has failed to demonstrate a reasonable likelihood that it will prevail on any challenged claim.

Dated: October 10, 2025

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24, the undersigned certifies that the foregoing Patent Owner's Preliminary Response contains 6,893 words excluding a table of contents, a table of authorities, Mandatory Notices under § 42.8, a certificate of service or word count, or appendix of exhibits or claim listing. Patent Owner has relied on the word count feature of the word processing system used to create this paper in making this certification.

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