

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,

Petitioner,

v.

ALMONDNET, INC. AND INTENT IQ, LLC,

Patent Owner.

Case No.: IPR2023-01281

Patent 10,715,878

PATENT OWNER'S RESPONSE

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Patent Owner's Exhibit List for IPR2023-01281

Pursuant to 37 C.F.R. § 42.63(e), Patent Owner Intent IQ, LLC hereby submits its exhibit list associated with the above-captioned *inter partes* review of U.S. Patent No. 10,715,878.

Exhibit No.	Description
2001	Declaration of Erik de la Iglesia in support of Patent Owner's Response ("de la Iglesia Decl.")
2002	<i>Curriculum vitae</i> of Erik de la Iglesia
2003	May 9, 2024 Deposition Transcript of Christopher Schmandt ("Schmandt Tr.").
2004	G-4100 v2 Product Page, <i>available at</i> https://wirelessnetworksupply.com/zyxel-zyair-g-4100-v2-80211g-wireless-hot-spot-in-a-box-p-3021.html
2005	G-4100 v2 User's Guide (July 2006)
2006	Forcing a Cable Modem to Get a New IP (November 2005), <i>available at</i> https://www.chiefdelphi.com/t/forcing-a-cable-modem-to-get-a-new-ip/66067/8
2007	U.S. Patent No. 8,677,398

I. Introduction

The Petition asserts obviousness against all challenged claims of U.S. Patent No. 10,715,878 (the “’878 Patent”) based on a combination of, at minimum, four separate references. *See* Pet. 4 (all grounds relying on at least Baig, Laidlaw, Sitaraman, and Hahn). However, the Petition fails to show how numerous aspects of the challenged claims are disclosed even under the Petition’s proposed combinations.

For example, in the Petition’s Ground 1 combination, the Petition fails to show how the combination would “determin[e] an association between device identifiers” as required by all challenged claims. Instead, what the Petition points to as constituting the claimed “determining an association” is at most a determination of an association between *users*, not a determination of an association between *devices* as required. *See, e.g.,* Ex. 1003 at ¶59 (quoted by Pet. 19) (“In particular, when a *user* at a hotspot logs into the website . . . , the *user* automatically becomes part of the vicinity-based *user group*.”).¹

The Petition additionally fails to establish that its combination would involve “determin[ing] that two . . . devices have separately accessed the Internet through a router of the LAN during a predetermined period of time” as required by all

¹ All emphases added unless otherwise noted.

challenged claims. The Petition relies on a dynamic IP address lease duration as constituting the claimed “predetermined period of time,” but does not even allege (much less show) that the prior art as allegedly modified would make a *determination* as to whether two devices accessed the Internet through a router of the LAN during that lease period. *See* Pet. 37-38 (no discussion of any *determination* regarding this alleged “predetermined period of time”).

The Petition’s Grounds 3-4 additionally fail, because those Grounds involve dependent claims reciting three requirements: “[1] the automatic action [recited in the independent claim] comprises selecting an advertisement, [2] from among a plurality of possible advertisements, [3] based at least in part on . . . user profile information.” *See, e.g.,* Ex. 1001 at Claims 6, 11, 17, 20. The Petition’s invalidity theories for Grounds 3 and 4 fail on all three requirements. **First**, the alleged “automatic action” of the independent claim (sending a user list to a user) undisputably does not comprise “selecting an advertisement”; the Petition is silent on this point. **Second**, the combination of references would not automatically “select[] an advertisement from among a plurality of possible advertisements”—instead, it would use an auction to select a winning *advertiser* who can subsequently select an advertisement. **Third**, even the selection of the winning advertiser is not “based at least in part on . . . user profile information”; the prior art instead teaches

that the selection of the winning advertiser is based solely on a highest bid price, and the Petition does not even allege a motivation to deviate from that approach.

Accordingly, all challenged claims should be found not unpatentable.

II. Background of the '878 Patent

The challenged claims of the '878 Patent (claims 1-4 and 6-23) are directed to novel systems and methods for, e.g., “determining an association between device identifiers of two or more Internet-accessing electronic devices,” by “determin[ing] that the two or more Internet-accessing electronic devices have separately accessed the Internet through a router of the LAN during a predetermined period of time via a common IP address.” Ex. 1001 ('878 Patent) at claim 1; Ex. 2001 ¶27.

The '878 Patent's specification discloses two primary types of systems, a first in which a “common service provider that acts as both an internet service provider and a television provider” (ISP/TVP) provides data to associate devices (Ex. 1001 at 9:31-13:3 and Figs. 1-6), and a second in which “the user need not receive both television service and Internet access from a common service provider” and the devices are associated instead via common IP address (*id.* 13:4 et seq. and Figs. 7-12). The claims of this continuation patent concern the “common IP address” embodiments, and the type of device (e.g., STB) is introduced only in dependent claims. Ex. 2001 ¶28.

Claim 1 is representative of all the independent claims (claims 1, 13, 22) challenged in the Petition. Claim 1 recites:

1. A method for identifying an association among multiple electronic devices of a group of devices connected through a common local area network (LAN) and using the association for cross-device action, the method comprising:

(a) with a computer system, determining an association between device identifiers of two or more Internet-accessing electronic devices based on electronically stored association-detection information about a plurality of Internet-accessing electronic devices, wherein the stored association-detection information for each of the plurality of Internet-accessing electronic devices includes:

(i) a device identifier;

(ii) at least one dynamically assigned IP address assigned to a modem that connects a router of the LAN to the Internet; and

(iii) at least one timestamp specifying a time when the Internet-accessing electronic device accessed the Internet via the router of the LAN;

(b) wherein determining the association in part (a) is done by using the stored association-detection information to determine that the two or more Internet-accessing electronic devices have separately accessed the Internet through a router of the LAN during a predetermined period of time via a common IP address;

(c) wherein the computer system determining the association in part (a) is outside the LAN and is connected to the LAN through the Internet; and

(d) with the computer system, using the association determined in part (a) to utilize user profile information associated with the device identifier of a first of the associated Internet-accessing electronic devices, and comprising behavioral or demographic data collected via the first of the associated Internet-accessing electronic devices, to take an automatic action with respect to a second of the associated Internet-accessing electronic devices using the device identifier of the second of the associated Internet-accessing electronic devices.

'878 Patent (Ex. 1001) at claim 1.

Notably, claim 1 requires, in part “determining that the two or more Internet-accessing electronic devices have separately accessed the Internet through a router of the LAN during a predetermined period of time via a common IP address.” *Id.* This process is described by the '878 Patent, which explains that a central ad server (“CAS”) obtains date and time information directly from both (1) a set-top box (“STB”) and (2) an online site so that the system can determine if “the STB was connected to a modem that was assigned an IP address at a time and date when the online site was accessed from that IP address.” *Id.* at 16:12-48. In this way, a POSITA would have recognized that the CAS can determine that two different Internet-accessing electronic devices (such as a STB and a laptop computer) separately accessed the Internet through a router of the LAN during a predetermined period of time (i.e., the period of time that the STB determines the IP address was assigned to STB, which is determined by the CAS due to the STB’s reporting of that

information). Ex. 2001 ¶¶29-31. Notably, the period of time that the CAS determines the STB and other device (such as a laptop) have separately accessed the Internet during is *not* the DHCP lease time, because the CAS does not have information about what the DHCP lease time actually is—it only knows the information that the STB has reported to the CAS. Ex. 2001 ¶32.

Dependent claim 6 further recites:

6. The method of claim 1 wherein the automatic action comprises selecting an advertisement, from among a plurality of possible advertisements, based at least in part on at least a portion of the user profile information associated with the device identifier of the first device.

Ex. 1001 at claim 6. This dependent claim requires that the “automatic action” recited in limitation 1(d) “comprises selecting an advertisement, from among a plurality of advertisements.” Furthermore, the selection must be based at least in part on at least a portion of the claimed user profile information. *See id*; Ex. 2001 ¶¶33-34. Requirements similar to those recited in claim 6 are also contained in dependent claims 7, 11, 12, 17, 18, 20, 21, and 23 challenged in the Petition.

III. Claim Construction

The Federal Circuit has held that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). This

principle applies equally to IPR proceedings. *See, e.g., Apple Inc. v. Uniloc Luxembourg S.A.*, IPR2018-00420, Paper 7 at 8 (PTAB, Aug. 6, 2018).

The Petition does not propose an express construction of any terms. *See* Pet. at 7. Patent Owner does not contend that any terms in the challenged claims require express construction for purposes of evaluating the Petition’s invalidity grounds.

IV. The Petition sets forth no theory under which the independent claims are unpatentable.

The Petition’s challenge to the independent claims of the ’878 Patent (claims 1, 13, and 22) is limited to Ground 1. *See* Pet. at 4. Under Ground 1, the Petition asserts that claim 1 is rendered obvious based on the four-way combination of Baig, Laidlaw, Sitaraman, and Hahn (“Baig combination”). *Id.* The Petition’s challenges for claims 13 and 22 merely rely on the analysis for claim 1. *See generally* Pet. at 52-53 (claim 13 analysis relying almost exclusively on an assertion that “[c]laim 13 is substantially similar to claim 1”); *id.* at 53-54 (claim 22 analysis relying almost exclusively on an assertion that “[c]laim 22 is substantially similar to claim 1 and claim 13”). Accordingly, if the Petition fails to show that claim 1 is unpatentable, none of the challenged claims may be found unpatentable (under any Ground).

As explained in further detail below, the Petition’s challenge to claim 1 fails for two independent reasons. *See* Ex. 2001 ¶¶36-76.

A. The Petition’s Baig combination determines an association between users, not between device identifiers as the claims require.

Claim 1 of the ’878 Patent requires “determining an association between device identifiers of two or more Internet-accessing electronic devices.” Ex. 1001 at claim elements 1(a). The Petition alleges that, in its Ground 1 combination, the claimed “device identifiers” are satisfied by a “cookie containing a session token used to identify a mobile device 102 that is logged into [Baig’s] content server.” Pet. 17-18. Thus, in order for the Petition to succeed, it must show that its proposed combination of references would “*determin[e] an association* between” cookies.

The Petition sets forth two “related[]” theories as to how the Baig combination would allegedly “determin[e] an association between” cookies. *See* Pet. 19-20. Both theories fail.

1. The Petition’s first theory—that each cookie corresponds to an associated device—fails.

The Petition’s first theory is that “the claimed association is determined because each device identifier corresponds to a mobile device that is part of the same vicinity-based community and connected via the same access point IP address.” Pet. 19. The structure of this argument is as follows:

Premise #1:	Baig places mobile devices into vicinity-based communities, such that Baig determines an association between the mobile devices.
Premise #2:	The cookies (i.e., the alleged device identifiers) correspond with the mobile devices placed into vicinity-based communities.
Conclusion:	Because Baig allegedly determines an association with mobile devices by placing them into vicinity-based communities, and because cookies allegedly correspond to those mobile devices, Baig therefore “determin[es] an association between” the cookies.

This logic fails at two different levels. As an initial matter, the Petition’s first premise is incorrect. Baig does not place *devices* into vicinity-based communities; rather, Baig places *users* into vicinity-based communities. Ex. 2001 ¶¶42-43. The Petition’s own citations to Baig in support of this argument make this clear. *See* Pet. 19 (citing Ex. 1003 at ¶¶ 40, 56, 59, 76); Ex. 1003 at ¶40 (“Once the *end-users* at a particular access point log into the website of the VCSP, *they are able to view other members* of the VCSP who have also logged in from the same access point associated with a particular wireless hotspot.”); *id.* ¶56 (“At step 306, the server 224 identifies all the *users* who have logged in from a common hot spot as having the same access point IP address.”); *id.* ¶59 (“In particular, *when a user at a hotspot*

logs into the website of the VCSP 202, *the user automatically becomes part of the vicinity-based user group.*”).

The Petition simply does not explain why Baig’s association of “*user[s]*” into a “*user group*” (*see* Ex. 1003 ¶59) constitutes a determination that any particular *devices* are associated together. And, as Patent Owner’s expert explains, a POSITA would not understand Baig’s association of users into a user group to be a determination of an association between mobile devices. Ex. 2001 ¶¶41, 43.

Furthermore, even if one were to accept the first premise of the Petition’s logic that Baig (alone or in combination) discloses a determination of an association of *devices* (which the Petition has not shown), the Petition’s conclusion still does not follow. This is because determining an association between *devices* are associated does not establish a determination an association between corresponding device *identifiers* are associated. Indeed, in addressing a family member to the ’878 Patent which similarly recited an “electronic association between the first and second device identifiers,” the Board specifically held that an allegation that *devices* are associated is insufficient to allege association of device *identifiers*. *See Yahoo! Inc. v. Intent IQ, Inc.*, IPR2017-01299, Paper No. 9 at 19 (Oct. 31, 2017) (“Yahoo! IPR”); *see generally* Ex. 2007 (U.S. Patent No. 8,677,398 that was at issue in the Yahoo! IPR, sharing common specification with the ’878 Patent); Ex. 2001 ¶44.

For example, in the Yahoo! IPR, the alleged electronic identifiers were a “make, type or model of a computer, cell phone, or television.” *Id.* The Board did not dispute that these were electronic identifiers of two different devices and further did not dispute that the two devices were associated. *See id.* at 18-19 (“**Although Petitioner demonstrates that Julia teaches an electronic association between devices . . . [the claim] requires an electronic association between the first device identifier and the second device identifier.**”) (italics in original). However, the Board nevertheless found that the Petition failed to identify an “association between the first device’s make, type, or model and the second device’s make, type, or model.” Yahoo! IPR at 19.

The Board’s rationale in the Yahoo! IPR forecloses the logic of the Petition, which relies on an alleged determination that **devices** are associated as establishing a determination that the corresponding device **identifiers** are associated. As shown above, the Board has already rejected the rationale that an association of devices is an association of device identifiers, and Petitioner does not provide any reason in this proceeding that the Board’s prior reasoning was incorrect. Indeed, the Board’s finding and detailed analysis in the Yahoo! IPR was correct, because “devices” are **not** “device identifiers.” *See* Ex. 2001 ¶¶44-46.

2. The Petition’s second theory—that cookies are associated because they are used to identify devices logged into the server—fails.

The Petition articulates its second theory as follows: “Second, and relatedly, the content server under the proposed combination ‘determin[es] an association’ between the ‘device identifiers’ because it uses the cookie assigned to each device to identify the device as being logged into the server, in order to place it into a vicinity-based community.” Pet. 19.

This second theory fails because, like the Petition’s first theory, it relies on the false premise that a *device* (rather than merely a *user*) is placed into a vicinity-based community, contrary to Baig’s teachings that the vicinity-based community is a “*user* group” to which “*users*” (not devices) are added. Ex. 1003 *id.* ¶59; Ex. 2001 ¶¶47-48.

The second theory fails for an additional reason: as Patent Owner’s expert explains, using cookies to place devices into a vicinity-based community does not equate to “determining an association between” the cookies. Ex. 2001 ¶49 (“Using cookies to determine whether *devices* are associated is distinct from determining whether *cookies* are associated) (emphasis in original).

To use an analogy, students may apply to a particular college using a social security number, which is used to enroll the students, each of whom are thereafter

identified by a *different* student ID (analogous to Baig’s username). Then, the students are sorted into dorm rooms based on some methodology such as date of birth or common interests. A determination that two students are assigned to the same dorm room may equate to a determination those two students are associated together. But it is *not* a determination that their social security numbers have been associated together, even though their social security numbers were used previously in the process that led to the two students being associated. If the dorm room assignment system does not use (or even know) the students’ social security numbers, for example, then there is no determination of an association between SSNs. *See* Ex. 2001 ¶50.

Likewise, although the Petition’s proposed combination allegedly uses cookies to allow users to log into Baig’s VCSP, after the users are logged into Baig’s VCSP, the Petition provides no evidence of the users being identified by anything other than their respective usernames for purposes of placing those users into a vicinity-based community. *See* Ex. 2001 ¶51. There is thus no evidence that the Baig combination would “determin[e] an association between” any two cookies, as opposed to, for example, determining an association between usernames as Baig suggests. Ex. 2001 ¶51.

* * *

Accordingly, both of the Petition's theories as to how the Baig combination allegedly "determin[es] an association between" cookies (i.e., the alleged "device identifiers") simply do not work. *See* Ex. 2001 ¶¶36-51 Therefore, the Petition fails to show that claim 1(a) of the '878 patent would be obvious in view of the Baig combination (Ground 1).

B. The Petition fails to show that Baig's system as modified would "determine that the . . . devices have separately accessed the Internet . . . during" a DHCP lease period, as the Petition's theory requires.

Claim limitation 1(b) recites: "determining the association in part (a) is done by using the stored association-detection information to determine that the two or more Internet-accessing electronic devices have separately accessed the Internet through a router of the LAN during a predetermined period of time via a common IP address." Ex. 1001 at 24:44-49.

Put more simply, limitation 1(b) requires a "determin[ation] that . . . two . . . devices have separately accessed the Internet through a router of the LAN during a predetermined period of time." *Id.* Both parties agree that this limitation does *not* describe "when the determination is made," but instead "requires that the system determines whether or not the accesses by [the] two electronic devices occurred within a predetermined period of time." Ex. 2003 at 8:22-9:10; Ex. 2001 ¶¶52-53.

As explained below, neither the Petition’s theory nor the Institution Decision in this IPR (Paper No. 7) show that Petitioner has met its burden to prove invalidity for this limitation. *See* Ex. 2001 ¶¶52-76.

1. The Petition’s DHCP lease theory fails.

The Petition maps “a predetermined period of time” to “the lease time that the dynamic IP address assigned to access point 106 remains valid.” Pet. 38 (discussing the “mapping of DHCP lease times to the claimed ‘predetermined period of time’”). Thus, in order for the Petition’s theory to succeed, the Petition must show that Baig as modified would determine whether or not the accesses by the two electronic devices occurred within a DHCP lease time.

The Petition fails to make such a showing for two reasons.

First, the Petition does not even *allege* that the Baig combination *determines* whether or not accesses by the two electronic devices occurred within a DHCP lease time. Instead, the Petition only alleges that the two devices (at least in certain cases) would happen to *perform* accesses during a given time period (the DHCP lease time)—i.e., the Petition seeks to show that “each mobile device has . . . separately accessed the Internet ‘during a predetermined period of time via a common IP address.’” *See* Pet. 37, 38 (“Mobile devices 102 would thus have accessed the Internet via access point 106 during ‘a predetermined period of time via a common

IP address,’ *i.e.*, during the lease time that the dynamic IP address assigned to access point 106 remains valid.”).

Notably, the question of whether two devices *happen to* access the Internet via an access point during a DHCP lease period is a different and separate question from the question of whether Baig’s content server would *determine* that those two devices accessed the Internet via access point 106 during a DHCP lease period. For example, if Baig’s content server makes no effort to determine whether two Internet accesses were within a DHCP lease period, a POSITA would readily understand that even if two Internet accesses happened to be within the DHCP lease period, Baig would not *determine* that the two accesses were within the DHCP lease period. Ex. 2001 ¶¶54-58.

Fatally for the Petition, it is entirely silent about any *determination* by the Baig combination that two devices accessed the Internet through a common access point fall within a given DHCP lease period. *See generally* Pet. at 35-38 (pointing to no *determination* by the Baig combination that takes into account a DHCP lease period).

Second, the Petition could *not* have alleged that Baig’s content server in the Baig combination would determine whether two devices accessed the Internet via a common access point during a DHCP lease period for the simple reason that Baig’s content server would have been unable to do so. This is because *Baig’s content*

server would have no information at all about the DHCP lease period applicable to a given access point. Ex. 2001 ¶¶59-65.

As explained by Patent Owner’s expert, a content server such as Baig’s would have had no insight into the operations of an access point, including when the lease period was first assigned, the duration of that lease period, or even whether there *is* a lease period in the first place (because Baig would not know whether a particular access point is assigned a static or dynamic IP address, and lease periods are only applicable to dynamic IP addresses). *Id.* Baig’s content server is a typical server hosting a website, and there would be no capability for such a server to obtain information from an Internet service provider (“ISP,” such as, e.g., Comcast) regarding which IP addresses are dynamically assigned. *Id.* ¶¶60, 65. Nor would such a server be able to obtain the duration and starting times of DHCP leases applicable to any particular IP address. Ex. 2001 ¶¶60-65, 75-76.

The Petition and corresponding expert declaration do not even address this issue, much less present any evidence to the contrary.

**2. The Board’s preliminary statements in the Institution
Decision cannot salvage the Petition’s deficiencies.**

As shown above, the Petition does not set forth any plausible basis as to why Baig’s content server would determine whether two devices accessed the Internet via a common access point during a DHCP lease period (i.e., the alleged

“predetermined period of time”). The Institution Decision is not to the contrary. Any preliminary statements in the Institution Decision regarding limitation 1(b) were made only for purposes of institution and are not dispositive of any issue for the instituted grounds. *See* Paper No. 7 at 21 (finding that “[b]ased on the evidence in the present record,” Petitioner had made a sufficient showing “for purposes of this [Institution] Decision”), 23 (determining that “the arguments and evidence presented in the Petition establish that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of [the] challenged claims”).

Indeed, it is well known that at institution, “the Board is considering the matter preliminarily without the benefit of a full record. The Board is free to change its view of the merits after further development of the record[.]” *Trivascular, Inc., v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016). Moreover, “there is a significant difference between a petitioner’s burden to establish a ‘reasonable likelihood of success’ at institution, and actually proving [unpatentability] by a preponderance of the evidence at trial.” *Id.* (citing 35 U.S.C. §§ 314(a) and 316(e)).

Patent Owner now explains why the Board’s preliminary statements in the Institution Decision do not (a) cure the deficiencies in the Petition or (b) show that Petitioner met its ultimate burden to prove invalidity at trial.

As an initial matter, the Board may have applied an interpretation of the claim language such that limitation 1(b) is satisfied so long as there is a “determination

during a predetermined period of time.” *See* Paper No. 7 at 18 (“Petitioner sufficiently shows that the combined teachings would have taught the recited determination during a predetermined period of time.”). But that interpretation is **not** the plain meaning of limitation 1(b)—nor has any party proposed or justified that interpretation as a matter of claim construction. Indeed, both parties’ experts agree that limitation 1(b) does **not** describe “when the determination is made.” Ex. 2003 at 8:22-9:4 (Petitioner’s expert: “I don’t think the limitation says when the determination is made.”); Ex. 2001 ¶¶52-53.

Instead, as both experts agree, limitation 1(b) “requires that the system determines whether or not the accesses by [the] two electronic devices occurred within a predetermined period of time”:

6	Q	So is it your opinion that the -- the
7		limitation 1B requires that the system determines
8		whether or not the accesses by the -- the two electronic
9		devices occurred within a predetermined period of time?
10	A	Yes.

Ex. 2003 at 9:6-10 (Petitioner’s expert); Ex. 2001 ¶53 (“[T]he limitation means that the determination is a determination as to whether the *accesses* by the two electronic devices *occurred within a predetermined period of time.*”) (Patent Owner’s expert) (italics in original); *id.* ¶67 (“Rather than describing the timing of when the determination is made, limitation 1(b) requires that the determination that is made

be a determination as to whether the accesses by the two electronic devices occurred within a predetermined period of time.”).

Accordingly, whether there exists “a determination during a predetermined period of time” is irrelevant to establishing that limitation 1(b) would be satisfied in the Baig combination proposed by the Petition.²

The Institution Decision goes on to state:

Baig used static IP addressing, but, based on the current record, Sitaraman’s teachings would have taught one of ordinary skill in the art to replace those static addresses with Sitaraman’s dynamic addressing, which would introduce the need . . . for the system to be aware of the lease time in which the dynamic addresses would be valid.

Paper No. 7 at 21. Respectfully, these preliminary statements cannot support the Petition’s theory or a final determination of obviousness for three reasons.

First, the Board’s statements improperly present an obviousness rationale that is absent from the Petition. Notably, the Petition says ***nothing*** about “the need for

² Notably, Patent Owner does not contest, as the ’878 Patent makes clear, that a DHCP lease period can be a “predetermined period of time.” Ex. 1001 at 4:22-26. However, that does not mean that every system that is able to cooperate with dynamic IP addresses satisfies the requirements of limitation 1(b), because limitation 1(b) requires ***determining*** whether two devices accessed an access point during the “predetermined period of time.” Whether the Petition identifies something that might qualify as a “predetermined period of time” is a far cry from establishing that the system *determines* that two devices access the Internet during the predetermined period of time, as required by limitation 1(b).

the system to be aware of the lease time in which the dynamic addresses would be valid” or any similar concept. *See* Ex. 2001 ¶72 (Patent Owner’s expert: “I did not see anything in either [the Petition or Mr. Schmandt’s expert declaration], for example, articulating any need for Baig’s system to be aware of a DHCP lease time (i.e., the ‘lease time in which the dynamic addresses would be valid’).”) The Petition is solely focused on *when the devices* access the Internet (i.e., during a DHCP lease period), and does not provide any theory regarding how Baig’s system would be modified to *determine whether* the devices accessed the Internet during a DHCP lease period. *See* Pet. 37-38.

That the Institution Decision exceeds the Petition’s use of Sitaraman can be seen by the fact that Petitioner’s expert confirmed that he simply relied on Sitaraman to show that an access point used to access Baig’s content server could make use of a dynamic IP address, but that this would *not* change the logic of Baig’s content server in any way:

5 **So I think I would say – I would say certainly**
6 **the Baig server, the VCSP server, needs to be able to**
7 **operate with addresses – addresses that are dynamic**
8 **rather than static, but I don't actually think that**
9 **changes the logic of this server.**
10 Q Okay. That's helpful.
11 A There are probably some – some edge cases; but
12 **basically the server's job is to detect connections from**
13 **the same address, and in a sense, that doesn't matter**
14 **whether those are static or dynamically assigned**
15 **addresses.**
16 **If they are dynamically assigned, they will**
17 **change at the frequency at which the DHCP lease expires;**
18 **hence, that's a predetermined time, but we don't**
19 **actually need to be running a clock to determine that.**

Ex. 2003 at 12:5-19 (highlighting added).

Patent Owner respectfully contends that page 21 of the Institution Decision misapprehended the Petition's theory for how or why Baig's content server would be modified in view of Sitaraman. In any event, the deposition testimony of Petitioner's expert (as well as the Petition itself) confirms that no such theory was offered. In these circumstances, and based on a full record, the Board should decline to further address the rationale on page 21 of the Institution Decision. *See, e.g., In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (“[W]hile the PTO has broad authority to establish procedures for revisiting earlier-granted patents in IPRs, that authority is not so broad that it allows the PTO to raise, address, and

decide unpatentability theories never presented by the petitioner and not supported by record evidence.”).

Second, a POSITA would recognize that the use of dynamic IP addresses for access points would **not** “introduce the need . . . for the system to be aware of the lease time in which the dynamic addresses would be valid” as the Board seems to have assumed. *See* Paper No. 7 at 21. As Patent Owner’s expert explains, DHCP lease expiration happens relatively infrequently such that the system would not need to know the lease time, because any “incorrect” assignment to a common hotspot would be relatively infrequent and would not significantly impact the accuracy of Baig’s content server. Ex. 2001 at ¶¶73-74. Specifically, a POSITA would have recognized that DHCP lease periods would have ranged from about a day on the low end (most common for home networks) to more than a week on the high end (most common for public access points). *See id.*

Thus, under a typical DHCP lease duration for an access point, the lease would stay valid for approximately a week. Accordingly, there would typically be only one moment in time over the course of a week when lease expiration would briefly and minimally impact the accuracy of Baig’s assignment of users into a common access point. A POSITA would recognize that this relatively minor amount of inaccuracy would have zero or *de minimis* effect on the accuracy of Baig’s system. Ex. 2001 ¶73.

The extremely limited nature of any hypothetical benefit to Baig’s system of “be[ing] aware of the lease time in which the dynamic addresses would be valid” is especially true because a POSITA would have understood (as Baig teaches) that the vast majority of access points use *static* IP addresses.³ Ex. 1003 at ¶64 (explaining that “the IP addresses of WiFi hotspots are mostly static IP addresses”). Thus, any potential benefit to increasing the accuracy of the system as applied to access points having dynamic IP addresses would only be applicable to a small minority of access points overall, thus providing at most a negligible benefit for only a small minority of access points used to access Baig’s content server. Ex. 2001 ¶¶73-74.

Again, the fact that Baig’s server would *not* need “to be aware of the lease time in which the dynamic addresses would be valid” (Paper No. 7 at 21) was *also* confirmed by *Petitioner’s* expert, who testified that the use of a dynamic IP address does not “change[] the logic of [Baig’s] server.” Ex. 2003 at 12:5-19; *see also id.* at 11:21-4 (stating that in the proposed combination, Baig’s content server does not even “need[] to know” “that dynamic IP addresses can change as a function of DHCP lease expiring”).

³ The Petition’s theory is not that *all* IP addresses used to access Baig’s content server would be dynamic. Nor could that be the Petition’s theory, because Baig’s content server has no control over (or even information regarding) whether specific access points used to access its website use dynamic or static IP addresses. *See* Ex. 2001 ¶74 n.4.

Third, even if—contrary to the opinions of both experts—there *were* some purported need “for the system to be aware of the lease time in which the dynamic addresses would be valid” (Paper No. 7 at 21), the Petition’s proposed combination provides no solution to any such need. *See* Ex. 2001 ¶¶75-76. “An obviousness determination requires finding *both* ‘that a skilled artisan *would have been motivated* to combine the teachings of the prior art ... and that the skilled artisan would have had *a reasonable expectation of success* in doing so.’” *In re Stepan Co.*, 868 F.3d 1342, 1345-46 (Fed. Cir. 2017) (emphasis added), *citing* *Intelligent BioSys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367-68 (Fed. Cir. 2016). As Patent Owner’s expert explains, Baig’s content server would simply have no way of knowing the lease times for all of the possible access points from which users might connect to the server, because that would require obtaining information from the ISPs (e.g., Comcast) supplying Internet service to the access points, and the ISPs would have no incentive to provide that information to Baig’s content server. Ex. 2001 ¶75. To the extent ISPs could be convinced to provide that information to Baig’s content server, Baig’s content server would likely need to provide compensation to the ISPs for that information, and then make extensive modifications to its system to obtain updated DHCP lease times for each of numerous access points and incorporate that information into the system’s logic. Ex. 2001 ¶75.

Given the scale and complexity of the modifications described above, there is no evidence that a POSITA would have reasonably expected success in making them. Ex. 2001 ¶76. And even *assuming* a reasonable expectation of success, a POSITA would *not* have been motivated to make such costly and extensive modifications to arrive at what would be, at best, an insignificant improvement to the accuracy of Baig’s assignment of users into common access point. *Id.*

C. The deficiencies of Claim 1 apply to all challenged claims.

The Petition relies on its analysis of independent claim 1 to show invalidity of the other independent claims (claims 13 and 17) based on the assertion that those claims are “substantially similar to claim 1.” Pet. at 52-54. Accordingly, the Petition fails to show the obviousness of any independent claim, and as a result cannot show the obviousness of *any* challenged claim under any Ground.

V. The Petition additionally fails to show unpatentability of Claims 6-7, 11-12, 17-18, 20-21, and 23.

Claim 6 recites “the method of claim 1 wherein the automatic action comprises selecting an advertisement, from among a plurality of possible advertisements, based at least in part on at least a portion of the user profile information associated with the device identifier of the first device.” Ex. 1001 at 25:11-15.

The Petition alleges that this limitation is met by a system in “which advertisers can target advertisements to users at a particular hotspot based on (among other things) demographic information such as age and gender.” Pet. at 63. The Petition further alleges that “[a]dvertisements are selected based on a competitive bidding system,” wherein an advertisement is automatically selected “based on demographic user profile information of the second device user, such as age and/or gender.” Pet. 64. The Petition then alleges that a POSITA would be further motivated to combine this system with Gerace, such that profile information of the *first* device user would be used in this process. *See* Pet. 64-67.

The Petition’s theory fails for several independent reasons. *First*, the Petition never alleges that the alleged “automatic action” of claim 1 (from which “the automatic action” of claim 6 derives antecedent basis) “comprises selecting an advertisement” as claim 6 requires. The Petition identifies only one “automatic action” of claim 1, namely “sending [user] list 606 as part of a webpage to the second mobile device over the Internet.” Pet. 42. But there is no reason for a POSITA to have understood sending a user list to a mobile device to comprise selecting an advertisement (Ex. 2001 ¶83), and the Petition provides no theory under which it would have been obvious for sending a Baig’s user list to comprise selecting an advertisement.

Second, the Petition’s argument is based on a misunderstanding of Baig’s auction system. Baig’s auction does not determine *which advertisement* will be displayed to a particular user, but instead determines *which advertiser* will have the right to display an advertisement (of the advertiser’s choice) to a user. *See* Pet. 63 (“[T]he winner of the bidding contest [i.e., the winning advertiser] receives exclusive rights to advertise on the VCSP website for the selected hotspot at a particular time of day, for example between 6-8pm to female end-users who are 18-25 years old at a particular location.”) (quoting Ex. 1003 ¶104). Accordingly, the action of “selecting an advertisement” is performed by the *advertiser* after they have won the “exclusive rights to advertise on the VCSP website,” *not* by Baig’s system (as would be required under the Petition’s mapping); Ex. 2001 ¶¶85-90.

Third, there is no motivation for any auction-based selection of an advertisement out of a plurality of possible advertisements to be *based on demographic information* as the Petition’s theory for claim 6 requires. The *advertisers*, under the Petition’s apparent theory, would each submit an auction price along with an advertisement to be displayed. Although the *advertisers* may select which advertisement to include in their bid response based on profile information, there is no indication that *Baig’s system* would choose which advertisement to select based in part on any profile information. To the contrary, Baig’s system, wanting to derive the highest possible profit from advertising, would presumably select the

proposed advertisement accompanying the highest auction price. Ex. 2001 at ¶¶75-76; Ex. 1003 at Claims 13 and 25 (disclosing selecting the winner of the auction based on “the highest bid”). Accordingly, to the extent Baig’s system selects an advertisement at all (rather than simply selecting which *advertiser* has the right to select the advertisement), it would do so based solely on the highest bid submitted by the advertisers, *not* based on any profile information of the user.

In the following, Patent Owner discusses in more detail each of the three independent reasons refuting the Petition’s obviousness theory for claim 6 (and related obviousness theories for claims 7, 11-12, 17-18, 20-21, and 23).

A. The alleged “automatic action” of claim 1 (sending a user list) does not “comprise[] selecting an advertisement” as claim 6 requires.

Claim 6 recites, in part “the method of claim 1 wherein *the automatic action comprises selecting an advertisement.*” Ex. 1001 at 25:11-15. The phrase “the automatic action” derives antecedent basis from the “automatic action” recited in limitation 1(d) (*see* Ex. 1001 at 24:59), because that is the only “automatic action” recited in claim 1. Thus, for claim 6 to be satisfied, the “automatic action” of limitation 1(d) must “comprise[] selecting an advertisement.” Ex. 2001 ¶81.

The Petition is explicit in mapping only one action to the “automatic action” for limitation 1(d), namely the action of “sending [user] list 606 as part of a webpage

to the second mobile device over the Internet.” Pet. 42. Petitioner’s expert confirmed as much at his deposition:

7 In your declaration, what do you allege to be
8 the, quote, automatic action, unquote, of claim
9 limitation 1D?
10 **A The sending of the information that's in**
11 **panel -- box 606 in Figure 6, which is a list of other**
12 **users -- other users who are in the vicinity of that**
13 **access point and their genders.**

Ex. 2003 at 13:7-13; *id.* at 15:1-9 (confirming that he did not identify any other actions as constituting the “automatic action” of limitation 1(d)).

Accordingly, the Petition must show that sending Baig’s user list 606 comprises selecting an advertisement. However, the Petition does not even *allege* this to be the case, much less provide the requisite showing. *See generally* Pet. 63-67 (the Petition’s claim 6 analysis not even mentioning transmission of Baig’s user list 606). And, of course, sending a list of users would not necessarily include (“comprise”) selecting an advertisement. Ex. 2001 ¶¶82-83. The Petition’s showing for claim 6 (as well as claims 7, 11-12, 17-18, and 20-21 which have parallel requirements) fails for this reason alone. Ex. 2001 ¶84.

B. Contrary to the Petition’s allegation, Baig’s system does not “select[] an advertisement, from among a plurality of possible advertisements.”

As discussed in subpart A just above, “the automatic action” alleged by the Petition for claim 1 is sending Baig’s user list 606, which is not alleged to comprise selecting an advertisement. The Petition’s claim 6 analysis further fails because the Petition does not show how Baig’s system “select[s] an advertisement, from among a plurality of possible advertisements” as required by claim 6.

The Petition contends that “[a]dvertisements are selected based on a competitive bidding system,” wherein Baig’s selection of a winning advertisement is “based on demographic user profile information of the second device user, such as age and/or gender.” Pet. at 64. The Petition further alleges that a POSITA would be further motivated to combine this system with Gerace, such that the combined system would use profile information of the *first* device user in this process. *See* Pet. 64-67.

Under the Petition’s claim 6 theory, then, it is necessary for Baig’s auction to select a winning *advertisement* (as opposed to merely selecting a winning *advertiser*), because only if Baig’s auction selects a winning *advertisement* from among a plurality of submitted advertisements could Baig “*select an advertisement*” from among a plurality of possible advertisements” as claim 6 requires. No other method of selecting an advertisement is suggested.

However, the Petition’s obviousness theory is based on the false premise that Baig’s system automatically selects which *advertisement* will be displayed out of a

plurality of advertisements submitted by a plurality of different advertisers. *See* Pet. 63-64. To the contrary, Baig’s system determines *which advertiser* will have the right to select an advertisement for display to a user. *See* Pet. 63 (“*[T]he winner of the bidding contest* [i.e., the winning advertiser] *receives exclusive rights to advertise* on the VCSP website for the selected hotspot at a particular time of day, for example between 6-8pm to female end-users who are 18-25 years old at a particular location.”) (quoting Ex. 1003 ¶104); *see also* Ex. 1003 at Claim 13 (reciting “selecting an entity associated with the highest bid” and subsequently “providing advertisements associated with said selected entity,” and providing no indication that Baig’s system—rather than the winning entity—selects which advertisement to display); Ex. 2001 ¶¶85-88.

Accordingly, there is no indication that Baig (alone or in combination with any other reference) discloses or renders obvious “selecting an advertisement from among a plurality of advertisements.” Rather, Baig implies that selection of an advertisement is performed by the *advertiser* after they have won the “exclusive rights to advertise on the VCSP website,” and *not* performed automatically by Baig’s system as claim 6 would require under the Petition’s mapping. Ex. 2001 ¶89.

In sum, Baig teaches that its system does not select an advertisement from among a plurality of advertisements in an auction but instead simply displays an advertisement provided by the advertiser. To the extent this can constitute Baig’s

system “selecting an advertisement” at all, it is not “selecting an advertisement from among a plurality of possible advertisements.” Instead, Baig’s system would simply select whatever advertisement for display that the advertiser provides to the Baig system, and no “plurality of possible advertisements” would be necessary for Baig’s system to select from. Ex. 2001 ¶90.

C. To the extent Baig’s system “select[s] an advertisement,” it does not do so “based at least in part on at least a portion of . . . user profile information” as required by claim 6.

Baig makes clear that it is the *advertisers* who determine how to target their advertisements based on profile data. E.g., Ex. 1003 at ¶93. But even assuming—contrary to Baig’s teachings as discussed above—that Baig’s auction system chooses between *advertisements* (as opposed to choosing between which *advertiser* is given the right to select an advertisement for display), the Petition makes no showing that Baig as modified would choose between advertisements “based at least in part on at least a portion of the user profile information” as required by claim 6. Instead, under that scenario, Baig would simply select the winning advertisement based on a highest bid price. Ex. 2001 ¶91.

More specifically, the Petition alleges that in Baig, “[a]dvertisements are selected based on a competitive bidding system.” Pet. 63. As a profit-maximizing company, the only role Baig would have in actually *selecting* a winning

advertisement from a plurality of advertisements submitted by different advertisers would be to determine which advertisement corresponds to the highest bid price. Ex. 2001 ¶92. In other words, under the Petition’s assumption that Baig selects an advertisement, selecting the winning advertisement would be based *solely* on which advertisement had the highest bid, not based even in part on profile information. Ex. 2001 ¶92.

Indeed, Baig explicitly teaches selecting the winner of the auction based solely on “the highest bid.” *See* Ex. 1003 at Claim 13 (“receiving bids to advertise” and “*selecting an entity associated with the highest bid*”); *see also id.* at Claim 25 (similarly “selecting an entity associated with the highest bid”). Baig does not disclose any other logic for selecting which advertiser “wins” the auction, and the Petition sets forth no motivation to modify Baig to select the winner of the auction based (even in part) on anything *other* than the highest bid price. *See* Ex. 2001 ¶93

Accordingly, there is no motivation for any auction-based selection of an advertisement out of a plurality of possible advertisements to be “*based at least in part on at least a portion of... user profile information*” as claim 6 recites. Although *advertisers* may select which advertisement to include in their bid response using profile information, there is no indication that *Baig’s system* as modified would choose which advertisement to select based in part on any profile information. Ex. 2001 ¶94. Although the Petition refers to age and gender

influencing advertising decisions, it provides no reason why *Baig's system*—rather than an advertiser (as Baig contemplates)—would select an advertisement based on that information.

This is yet another, independent reason why the Petition's theory regarding claim 6 cannot succeed.

D. The Petition also cannot show invalidity of claims 7, 11-12, 17-18, 20-21, and 23.

Claim 7 depends from claim 6; thus, the Petition's failure to show obviousness of claim 6 is fatal to the Petition's invalidity theory for claim 7. And the Petition merely incorporates by reference its analysis of claims 6-7 in its allegation that claims 17-18 are obvious. *See* Pet. 67. Additionally, the Petition relies on its analysis of claims 6-7 to support its obviousness allegations regarding claims 11-12, 20-21, and 23. *See* Pet. 67-68 (relying on claims 6-7 for claims 11-12, and relying on claims 11-12 for claims 20-21 and 23). Accordingly, the Petition has not shown any of claims 6-7, 11-12, 17-18, 20-21, and 23 are obvious for the reasons presented in this Section.

VI. Conclusion

For the reasons set forth above, Patent Owner respectfully requests that the Board find all challenged claims not unpatentable.

Date: May 29, 2024

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CERTIFICATION REGARDING WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), Patent Owner hereby certifies, in accordance with and reliance on the word count provided by the word-processing system used to prepare this **PATENT OWNER'S RESPONSE**, that the amount of words in this paper is 7,870. Pursuant to 37 C.F.R. § 42.24, this word count is in compliance with the word limit set forth in 37 C.F.R. § 42.24(b)(2) excluding the portions exempted under 37 C.F.R. § 42.24(a)(1).

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on May 29, 2024, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioners:

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