

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC., ROKU, INC., and
SAMSUNG ELECTRONICS CO., LTD.,
Petitioners,

v.

ALMONDNET. INC. and INTENT IQ, LLC,
Patent Owners.

Case IPR2023-01281¹
U.S. Patent No. 10,715,878 B2

PATENT OWNER'S SUR-REPLY

¹ Roku, Inc. filed a petition in IPR2024-00666 and was joined as petitioner in this proceeding. Samsung Electronics, Co., Ltd. filed a petition in IPR2024-00701 and was joined as a petitioner in this proceeding.

Table of Contents

I. Introduction 1

II. The Petition’s combination would not determine whether two devices accessed the Internet during the alleged “predetermined period of time” (i.e., a predetermined DHCP lease duration). 2

 A. The Petition’s new inherency theory fails. 3

 1. Two devices accessing the Internet via a common dynamic IP address does not mean that they accessed the Internet via a given, predetermined DHCP lease period. 4

 2. Petitioner’s theory renders the “predetermined period of time” limitation entirely superfluous. 8

 3. Petitioner’s theories are inconsistent with the ’878 patent. 12

 B. Petitioner’s new ISP theory also fails. 16

 1. Baig does not disclose or render obvious its content server being part of an ISP. 17

 2. If Baig’s content server were provided by an ISP, there is still no evidence that it the content server would satisfy the claims. 19

III. The Petition’s Baig combination does not determine an association between the alleged device identifiers. 23

IV. The Petition’s Grounds 3-4 also fail. 25

V. Conclusion 27

Table of Authorities

Cases

<i>Funai Elec. Co. v. Daewoo Elecs. Corp.</i> , 616 F.3d 1357 (Fed. Cir. 2010)	8
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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
2008	October 3, 2024 Deposition Transcript of Christopher Schmandt ("Schmandt Reply Tr.")

I. Introduction

Petitioner's Reply raises numerous new invalidity theories. However, even if considered, Petitioner's theories fail.

First, Petitioner introduces two new theories regarding how Baig's content server would "determine that two... devices have separately accessed the Internet... during a predetermined period of time" as required by all challenged claims. The first new theory—that the claim requirement is inherently satisfied when two devices are observed using a common dynamic IP address—fails because it improperly renders determining whether accesses are within "a predetermined period of time" entirely superfluous with other claim language. The second new theory—that Baig's content server is part of an ISP—also fails because it is factually unsupported and because Petitioner doesn't explain how this change satisfies the claim requirements.

Second, cookies (i.e., the alleged "device identifiers") are stored on user devices, not Baig's content server, and Petitioner fails to explain how Baig's content server would "determin[e]" an "association" between them as required.

Third, Petitioner fails to show that the alleged "automatic action" (updating a user list) "comprises selecting an advertisement" as Petitioner's Grounds 3-4 require. Petitioner's Reply newly argues that updating the user list could involve *delivering* an advertisement, but does not explain (1) why *delivering* an advertisement *includes selecting* the advertisement ("selecting" and "direct[ing]")

are separately claimed), or (2) why a POSITA would have unnecessarily transmitted an advertisement with user list updates.

Accordingly, all challenged claims should be found not unpatentable.

II. The Petition’s combination would not determine whether two devices accessed the Internet during the alleged “predetermined period of time” (i.e., a predetermined DHCP lease duration).

The Petition maps a predetermined DHCP lease period (e.g., 24 hours²) to the “predetermined period of time.” Pet. 38. The DHCP lease starts at a particular moment in time, and will expire at the end of the lease period if no further action is taken. See Ex. 2008 at 26:17-27:20 (Petitioner’s expert explaining that because a DHCP lease can be renewed beyond the predetermined period, “it’s possible for the same IP address to extend beyond the original DHCP lease period”).

Thus, in order for Baig’s content server to “determine that the two or more Internet-accessing electronic devices have separately accessed the Internet... during a predetermined period of time,” it must determine whether they accessed the Internet during a given DHCP lease period (e.g., a period starting at 12pm on Thursday, and ending at 12pm on Friday). See Ex. 2003 at 9:6-10 (opining that

² See Ex. 2008 at 26:4-15 (giving an example of the predetermined lease length as “24 hours”).

“limitation 1B requires that the system determines whether or not accesses by [the] two electronic devices occurred within a predetermined period of time”).

The Petition did not even *allege* any “determination” that Baig’s content server would perform regarding whether “two... devices have separately accessed the Internet... during a predetermined period of time.” POR 15-16.

In Reply, Petitioner introduces a new inherency theory that if two devices access a server via a common, dynamically assigned IP address, that the server has *necessarily* determined that the two devices accessed the Internet during a predetermined period of time. Reply 12 (alleging: “the access through [a common IP address that was dynamically assigned] by the two or more mobile devices is sufficient to have determined that the accesses occurred during ‘a predetermined period of time’”).

The Reply also sets forth an *additional*, alternative new theory that Baig’s content server would be provided by ISP. Reply 14-19 (discussing the new theory where Baig’s content server is provided by an ISP).

Both of these new theories are improper, but as explained below, they fail even if the Board considers them.

A. The Petition’s new inherency theory fails.

Patent Owner’s Response explained that Baig’s content server would not know the alleged “predetermined period of time” (i.e., a DHCP lease duration). POR

16-17 (explaining that the claimed determination would be impossible without that knowledge). Petitioner’s only argument to the contrary is that Baig’s content server is part of an ISP. Reply at 14-19 (not specifying any other way in which Baig’s content server would allegedly be aware of a predetermined lease duration). Accordingly, it is undisputed that unless Baig’s content server were part of an ISP, it would not even *know* the predetermined period of time. (Petitioner’s ISP-based theory is addressed separately in Section II.B, below.)

Petitioner attempts to cure this deficiency by arguing for the first time in Reply that the claimed “determin[ation]” is *inherent* if a server observes two devices accessing the Internet via a common, dynamically-assigned IP address. See Reply 12. This argument fails because (1) it is factually incorrect, (2) it renders the claim language superfluous, and (3) it is inconsistent with the teachings of the ’878 patent. Each of these reasons is discussed in turn.

1. Two devices accessing the Internet via a common dynamic IP address does not mean that they accessed the Internet via a given, predetermined DHCP lease period.

The Petition’s substantive analysis of the requirement of “determin[ing] that the two or more... devices have separately accessed the Internet... during a predetermined period of time” was limited to the allegation that “each mobile device *has* also separately accessed the Internet ‘during a predetermined period of time,’”

with no discussion of how Baig’s content server would **determine** as much. Pet. 37-38.³

Petitioner’s new Reply theory attempts to justify the Petition’s deficiency by asserting that the determination would have been **inherent**, based on the premise that “the access through [a common IP address that was dynamically assigned] by the two or more mobile devices is sufficient to have determined that the accesses occurred during ‘a predetermined period of time.’” Reply at 12. However, Petitioner’s premise is incorrect.

As was well-known to a POSITA (and as admitted by Petitioner’s expert Mr. Schmandt), the *actual* duration of a dynamic IP address being assigned to a device is **not** *coextensive* with the “*predetermined*” DHCP lease duration. Ex. 2008 at 26:7-20 (testifying that “[s]tarting halfway through the lease period, the client should be asking to renew the lease,” and it is common for the “lease [to be] renewed” such that “the same IP address” will “extend beyond the original [predetermined] DHCP lease period”).

In the example of a predetermined 24-hour lease period starting at 12pm on Thursday for a WiFi hotspot client, at midnight the client would begin “asking to renew the lease.” *Id.* 26:19-22. Then, at some point before lease expiration, the

³ All emphases herein added unless otherwise specified.

DHCP server can “renew” the lease such that “a new address is not assigned” such that “the lifetime of the current address is extended.” *Id.* 26:19-20. Therefore, a **new**, **different** predetermined DHCP lease period to begin on Friday at noon, even though the WiFi hotspot keeps the **same** IP address.

Thus, determining that two devices accessed the Internet from the same dynamic IP address (even if from the same router) does **not** inherently determine that they accessed the Internet during Petitioner’s alleged “predetermined period of time.” For instance, two different users could access the Internet via a common IP address through the WiFi hotspot at two different times, 11:55am on Friday, and 12:05pm on Friday. Factually, these two accesses were **not** within the alleged “predetermined period of time”—i.e., the original 24-hour DHCP lease duration.⁴ Instead, only **one** of the accesses occurred within the Petitioner’s alleged “predetermined period of time” under that scenario.

Furthermore, Baig’s content server can observe the **same** IP address even **after** the IP address has been reassigned to a different WiFi Hotspot (e.g., at the expiration of a predetermined DHCP lease period, if the IP address were not renewed). For example, as Petitioner’s own evidence shows, it is possible for the

⁴ The renewed lease comes with its own, **separate** predetermined lease duration. For example, the predetermined DHCP duration does not become 48 hours instead of 24 hours; instead, there are two separate predetermined 24-hour periods.

DHCP lease server to reassign a first hotspot's IP address to a **different** WiFi hotspot at noon on Friday. *See* Reply, 18 (“Once the lease expires, the IP address can be ‘recycled’ and given to another machine.”). In that scenario, if someone accesses the Internet at 11:55am on Friday from the first hotspot, and another person accesses the Internet at 12:05pm on Friday from the second hotspot, Baig’s content server will observe a “common IP address,” even though they did **not** both access the Internet during the DHCP lease duration (or even access the Internet from the same hotspot). But under Petitioner’s theory, this would nonsensically be “sufficient to have determined that the access occurred during ‘a predetermined period of time.’” Reply 12.

Finally, there is undisputed evidence that, unless Baig’s content server were provided by an ISP, the content server would not know whether any given IP address was static or dynamic. Ex. 2001, ¶¶63, 65 (“[W]hether or not an IP address is dynamic or static... wasn’t generally made available to third parties.”). In the case of a static IP address, there is not alleged to be **any** “predetermined period of time” that would satisfy the claims in Petitioner’s combination, such that Baig’s content server would not even know **whether** a relevant DHCP lease period existed. *See id.* ¶65 (“lease periods are only applicable to dynamic IP addresses”).

Thus, simply observing two devices accessing the Internet through a common IP address is **not** “sufficient to have determined that the accesses occurred during ‘a predetermined period of time’” as the Reply newly alleges. Reply 12.

2. Petitioner’s theory renders the “predetermined period of time” limitation entirely superfluous.

Petitioner’s new inherency argument fails for an additional reason: it improperly renders claim language superfluous. *See Funai Elec. Co. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1372 (Fed. Cir. 2010) (“We must give meaning to all the words in [the] claims.”). Specifically, if it is inherent (or “sufficient”) for a system⁵ that observes two different devices accessing the Internet from a common, dynamically-assigned IP address to “determine that” those devices “separately accessed the Internet... during a predetermined period of time,” (*see* Reply 12), then the requirement that the system be configured to “determine that the two or more Internet-accessing electronic devices have separately accessed the Internet... during a predetermined period of time” would be effectively read out of the claim.

Indeed, at his deposition, Mr. Schmandt admitted that “determining that two devices accessed the internet via a common dynamic IP address is **necessarily** a

⁵ The challenged claims include both system and method claims with similar limitations. *Compare* Ex. 1001, claims 1, 13.

determination that the two devices accessed the internet during a predetermined period of time”:

4 Q. Yeah. Okay. So it your opinion that
5 determining that two devices accessed the internet via a
6 common dynamic IP address is necessarily a determination
7 that the two devices accessed the internet during a
8 predetermined period of time?

9 MR. MACE: Objection.

10 A. Yes.

Ex. 2008, 30:7-31:10.

Of course, however, the challenged claims *already* recite determining “that two devices... accessed the Internet... via a common IP address.” *E.g.*, Ex. 1001, 24:46-49. And the claims *also* are explicit that the IP addresses at issue are “dynamically assigned” IP addresses. *E.g.*, *id.* 24:33-45. Thus, under Petitioner’s proposed interpretation, the determination of a “predetermined period of time” is entirely superfluous.

Counsel for Petitioner elicited redirect testimony from Mr. Schmandt implying that his earlier testimony did not extend to *all* dynamic IP addresses, but was instead limited dynamic IP addresses *assigned using DHCP*. See Ex. 2008, 50:6-19 (Mr. Schmandt testifying on redirect that “[i]f the dynamic IP address wasn’t assigned through DHCP,... the rest of my logic would not have made sense”);

see also id. (Mr. Schmandt acknowledging that he talked with his counsel before redirect, and refusing to testify whether “counsel instruct[ed him] how to answer the questions [he] just answered”).

This implication that there is any difference between these two scenarios (i.e., that some dynamic IP addresses are **not** assigned via DHCP), however, is incorrect. For instance, Mr. Schmandt had previously admitted that a “DHCP server” is responsible for “assigning dynamic IP addresses,” with no qualifications added:

11 Q. What entity is responsible for assigning
12 dynamic IP addresses?
13 A. The DHCP server.

Ex. 2008, 31:11-13. Mr. Schmandt also testified that he did not know of “**any** instances in which a router is assigned a dynamic IP address without the use of DHCP,” and said he could not give **any** “example of a way that a router of a LAN has received a dynamic IP address without DHCP.” Ex. 2008 52:18-54:9.

And in his opening declaration, Mr. Schmandt opined that the “approach” of using “‘dynamic’ IP addresses” is a process “in which a device is assigned an IP address... by a server known as a Dynamic Host Configuration Protocol (DHCP) server”:

112. Sitaraman acknowledges that with the exponential growth of the Internet, companies and users are faced with an increasing shortage of IP addresses, since there is a finite number of static addresses. (Sitaraman, 3:21-29.) One well-known approach to address this issue is known as “dynamic” IP addresses, in which a device is assigned an IP address that is dynamically assigned by a server known as a Dynamic Host Configuration Protocol (DHCP) server. DHCP refers to an industry-standard technique in which a device on a network (such as a client) can ask a DHCP server “to provide it with an IP address and configuration parameters. A DHCP server on the network that is authorized to configure this client will offer an IP address by sending a reply to the client.” (Sitaraman, 3:34-40.)

Ex. 1002, ¶112.

Accordingly, the evidence of record shows that, contrary to Petitioner’s attempted “clarification” on redirect, dynamic IP addresses ***are always*** assigned by DHCP, and there is no evidence that dynamic IP addresses can be assigned in any ***other*** manner. Thus, the evidence shows that Petitioner’s inherency theory renders the “predetermined period of time” determination entirely superfluous with the remainder of the claim language.⁶

⁶ The Reply proposes a hypothetical in which the “predetermined period of time” could be nonsensically “mapped to a time period having no relationship with access via the common IP address,” such as “Lent,” “Passover,” or “Ramadan.” Reply 14. But the fact that there might be some illogical “predetermined period[s]

3. Petitioner's theories are inconsistent with the '878 patent.

Petitioner alleges that its claim interpretation is “consistent with the written description of the '878 patent and the very embodiment cited by Patent Owner.” Reply 13. This allegation is incorrect.

As an initial matter, Petitioner points to the Institution Decision's observation that the “time interval [i.e., the predetermined period of time] can be selected to be commensurate with a typical or average time interval for dynamic reassignment of the online access IP address by the user's Internet Service Provider.” ID at 19-20 (quoting Ex. 1001, 14:9-15, cited by Reply 13). But there, the “time interval” / “predetermined period of time” is **not** the DHCP lease period; it is instead an **approximation** of a “average time interval for dynamic reassignment” of an IP address. Petitioner has never even alleged, much less provided any evidence, that it would be obvious for Baig's content server to determine whether two Internet accesses were within a selected “time interval” designed to approximate an average IP address duration.

of time” (e.g., a one-second span starting a billion years in the future) that would **not** meet the claim language does not negate the fact that under Petitioners' proposed interpretation, the determination with respect to “**a** predetermined period of time” (i.e., a predetermined lease duration) is **subsumed by** the rest of the claim language. Reply 11; Ex. 2008, 31:4-10.

Regarding the embodiment at 16:12-48, that is another example of calculating a “predetermined period of time” that is **not** the actual DHCP lease period. Ex. 2001, ¶31-32. Instead, the CAS determines periods of times that a particular IP address was assigned to a particular set top box (STB), based on the STB “periodically sampl[ing]” the IP address assigned to its router/modem, storing the samples, and “report[ing] to CAS 40 all of the common IP addresses assigned to modem 32 and all the corresponding dates and times they were used.” Ex. 1001, 16:12-27. A hypothetical example of what this reported information might look like is reproduced below, with the set-top box reporting three different IP addresses (A–C) over six different reported sample times (t1–t6).



Based on that reported information, the CAS can thus **determine** “periods” of time during which the IP address was assigned to the set-top box. Then, when the CAS later receives reported times and dates when other devices are assigned to a different device (obtained, e.g., from an “online site’s reporting”), the CAS can compare the online site accesses of particular IP addresses to the periods of time that the CAS has predetermined were assigned to the set-top box. See Ex. 1001, 16:30-48 (discussing “cross-matching” between the two lists).

In the example diagram above, the “predetermined period of time” could either be the period between t1 and t3 (for IP address A), or the period between t5 and t6 (for IP address C). Then, if the reported data from the online site showed that another device was observed accessing an online site using IP address A at time t2.5 (i.e., a time between t2 and t3), the CAS would know that the STB and other device both accessed the Internet via a predetermined period of time corresponding to IP address A (i.e., the time period between t1 and t3).

Petitioner’s analysis does not substantively address this embodiment, except to assert that “multiple points in time” do not convey “a ‘period of time’ because [they] tell[] the CAS 40 nothing about any period after any particular point.” Reply 13 (emphasis in original). That assertion is incorrect, because the CAS **does** have information about periods after a particular point in time (e.g., after t1 and t5). In the above example, the reported points in time would be used to **predetermine** periods of time (e.g., t1 to t3 and t5 to t6) that correspond to certain IP addresses (e.g., IP addresses A and C), such that the CAS can accurately determine whether an access reported by the online site was within that predetermined period of time corresponding to the appropriate IP address.

The purposes of using the “predetermined period of time” in these embodiments is to reduce “the “small fraction of television ads that are misdirected, if the online access IP address is reassigned between the accessing of the online

site... and the relied-upon contact between the user's STB and the CAS (i.e., associating the IP address)." Ex. 1001, 14:49-15:17 ("That fraction can be reduced by **reducing** the periodic time interval between STB reports of its common IP address to the CAS....").

In other words, the predetermined period of time is disclosed as a means of addressing the fact that the ad server does **not** know the precise times that an IP address will be reassigned—it thus uses a "predetermined period of time" such as a calculated period or a set period such as 24 hours, to avoid associating devices observed using a common IP address that is likely to have been reassigned to a different modem between the observations. *See id.* 14:49-15:12 (explaining that ad delivery is more accurate "[i]f the periodic contact interval is sufficiently small relative to the typical or average time interval between reallocation of IP addresses").

In summary, the specification does not teach that the CAS determines whether two devices accessed the Internet through a predetermined DHCP lease duration. Instead, the CAS determines whether the accesses were within some other "predetermined period of time" (such as a periodic contact interval or a calculated period of time) to reduce the chance of incorrectly associating devices based on a reassigned IP address. *See generally* Ex. 1001, 13:47-19:10. The specification also confirms that determination that two devices accessed the Internet during a "predetermined period of time" is not **inherent** in determining that two devices

accessed the Internet through a common IP address—as cited above, the specification provides extensive teachings on how a time period can be determined, and then **used by** the system to reduce inaccuracy caused by IP address reassignment.

None of Petitioner’s theories are consistent with these teachings. Petitioner, for instance, provides no discussion of using a predetermined period of time to avoid uncertainty associated with IP address reassignment in the proposed combination. And tellingly, Petitioner does not identify **any** portion of the specification that Petitioner believes accurately reflects the claimed “determin[ing] that... the two... devices have separately accessed the Internet... during a predetermined period of time.”

B. Petitioner’s new ISP theory also fails.

The POR made clear that Baig’s server **cannot** perform the claimed determination because Baig does not even have the requisite information to do so. POR 16-17. Notably, Patent Owner did not in any way imply or concede that if Baig’s server **did** have that information, it **would** perform the claimed determination.

In Reply, Petitioner alleges for the first time that Baig’s content server would be part of an ISP. Reply, 14-19. That theory fails for at least two reasons. First, it is unsupported by and inconsistent with Baig’s disclosure. And second, Petitioner *also* does not explain **how** or **why** Baig’s content server, even if part of an ISP, would

have (1) obtained the DHCP information from a DHCP server or (2) used that information to perform the claimed “determin[ation].”

**1. Baig does not disclose or render obvious its content server
being part of an ISP.**

Petitioner’s new allegation that Baig’s content server is part of an ISP is solely based on the fact that Baig uses the generic term “service provider” to refer to services provided by the content server over a “public network.” *See* Reply 16-18. Of course, the fact that an entity is a “service provider” over a public network such as the Internet does not mean that the entity is an “Internet service provider/ISP,” which is a specific term that means a provider of internet connectivity services. By way of example, Meta itself is a “public network service provider” as it uses the Internet to provide Facebook services, but it is not an *ISP* because it doesn’t provide *Internet connectivity services*.

Petitioner’s allegation that Baig’s content server must be an ISP is also undermined by the admission of its expert that the term “service provider [can] refer to an entity that isn’t an internet service provider.” Ex. 2008, 35:24-36:25. Mr. Schmandt also agreed that “Baig discusses at length what services are provided by the conte[n]t server” (*id.* 39:12-14), but that these services **do not** include “internet connectivity services.” *Id.* 41:6-12 (“Baig does not talk about how the connectivity is provided. *That’s beyond the scope of Baig.*”).

Indeed, Baig itself teaches that its content server does **not** have information typically available to ISPs. As Mr. Schmandt acknowledged, an ISP (e.g., Comcast) would have some way of identifying the location of an Internet hotspot an Internet access is coming from. Ex. 2008, 34:20-35:11. But Baig’s discloses that it “requests the **user** to provide geographical information (e.g., street address or venue name) corresponding to the hotspot 110 from which they are accessing the Internet 122.” Ex. 1003, ¶[0057]. If Baig’s content server had information available to the ISP, it would **not** need potentially unreliable user-provided geographical information.

Accordingly, Petitioner fails to show that Baig expressly or inherently discloses its content server is part of an ISP. Petitioner also does not provide any evidence to modify Baig’s content server to be part of an ISP. *See generally* Reply 14-19 (alleging this “would have been obvious,” but providing no evidence of a motivation to do so).⁷

⁷ Petitioner conclusorily asserts “it would have been obvious that the proposed combination would have ‘introduce[d] the need for the system to be aware of the lease time in which the dynamic addresses would be valid.” Reply 15. But Petitioner does not even **allege** there is any evidence supporting this assertion, and Patent Owner already explained (with extensive supporting evidence) why there would be **no** such need. POR 20-24 (citing Ex. 2001 ¶¶72-74); *see also* Ex. 1022 ¶33 (Mr. Schmandt addressing, but **not** disputing, PO’s expert’s opinion that there would have been no need for Baig’s content server to be aware of the lease time).

2. **If Baig’s content server were provided by an ISP, there is still no evidence that it the content server would satisfy the claims.**

Petitioner fails to show how Baig’s content server being part of an ISP would satisfy the claim requirements for numerous reasons.

First, the Petition does not allege what action would constitute determining whether two devices “accessed the Internet... during a predetermined period of time” if Baig’s content server were part of an ISP. According to Petitioner, the claimed determination would be satisfied even if the content server did **not** know the “predetermined period of time.” See Reply 11-12 (alleging that when Baig’s “system determines that two or more mobile devices have accessed the Internet ‘via a common IP address,’ that also determines that the access occurred during a DHCP lease time,” even if Baig’s content server did not “have actual knowledge of the... predetermined period of time”). It is thus entirely unclear what further modification Petitioner believes would be necessary or motivated to satisfy the claim language, and the Reply does not provide any guidance in this regard. See generally Reply 14-19 (discussing only the content server being part of an ISP, and not explaining how this would change the operation of the content server other than “ha[ving] knowledge of DHCP lease times,” which is not the claim requirement).

Second, even if Baig’s content server were part of an ISP, Petitioner does not contend that Baig’s (alleged) DHCP server would be the *same server* as Baig’s content server. See Ex. 2008, 35:12-23 (clarifying question as to whether “Baig’s content server is an internet service provider” with the answer: “Baig’s content server is part of an ISP,” and further clarifying that the ISP would include other aspects like “the DHCP server”). Thus, for Baig’s content server to account for DHCP lease durations, a POSITA would need to coordinate transfer of that information from the DHCP server to Baig’s content server. Ex. 2001, ¶64 (“[T]here is no evidence that an ISP would have been able to effectively provide a website server such as Baig’s content server with information about DHCP lease periods for a large number of access points, as ISPs did not have established systems for ISPs to share that type of information with content servers.”). There is thus evidence that the functionality that Petitioner implies would be implemented in its new theory was not conventional, and Petitioner introduces no evidence to the contrary.

As Patent Owner’s expert explained, this new information-sharing functionality between DHCP server and content server “would have required a massive amount of complexity and experimentation,” “[e]ven **assuming** an ISP would have had no objection to providing” that information to the content server. Ex. 2001, ¶64 (“ISPs did not have established systems... to share that type of information with content servers.”); POR 16-17. Petitioner entirely ignores this

evidence, other than to conclusorily assert that “extensive modifications” would not have been required with no supporting evidence or reasoning. See Reply 18 (conclusorily alleging, with no supporting evidence, that there is not “any merit to Patent Owner’s contention that ‘extensive modifications’ would have been required”); Reply 14-19 (not providing evidence of reasonable expectation of success, predictability, or motivation⁸ to share information between a DHCP server and Baig’s content server).

Third, the modifications discussed immediately above for Baig’s content server to receive information from the DHCP server would have only provided even a *potential* benefit as applied to only those WiFi hotspots that received Internet connectivity from that *particular* ISP. Ex. 2008, 41:13-17 (admitting that if a content server were part of an ISP it “would **only** have information about DHCP lease periods that were assigned by that particular ISP”). And it is undisputed that in the relevant time period there were “well into the thousands” of distinct ISPs, such that the extensive modifications to Baig’s content server would have only even *potentially* had *any* countervailing benefit as applied to only a small fraction of overall WiFi hotspots. Ex. 1023, 48:15-49:8 (quoted by Reply 18-19). Again, Petitioner sets forth no evidence of a motivation to engage in such complicated

⁸ See *supra*, note 7.

coordination between Baig’s content server and a DHCP server (even if controlled by the same entity), given that any results would be applicable to relatively few hotspots.

Fourth, even *assuming* that a POSITA would have found it obvious for Baig’s content server to have access to all the information available to the DHCP server, there is no identified motivation to determine whether two device accesses were within a given DHCP lease period as required. The purpose of Baig’s common-IP determination is to ascertain whether two users are accessing the Internet from a common hotspot. See Ex. 1003, ¶[0038] (“The VSCP identifies a group of users **at a wireless hotspot** based on their common public IP address and interconnects them, thereby creating a vicinity-based group.”). But Mr. Schmandt acknowledged that ISPs are **already** able to determine the hotspot from which a user is accessing the Internet. Ex. 2008, 34:20-35:11. Petitioner presents no evidence that determining whether two devices used a common IP address “during a predetermined period of time” would be necessary or helpful **for an ISP** (which *already* knows the location of the Internet accesses) to determine whether two devices are accessing the Internet from a common hotspot.

Accordingly, even if Petitioner’s improper new argument that Baig’s content server is part of an ISP were considered **and** accepted, Petitioner still has not shown

the obviousness of determining whether two devices accessed the Internet during the alleged “predetermined period of time.”

III. The Petition’s Baig combination does not determine an association between the alleged device identifiers.

Petitioner identifies “cookies” as being the alleged device identifiers. Reply 9 (“the system would have used the cookie to identify a mobile device”). But Petitioner fails to explain how the “cookies” in the proposed combination would have been determined by Baig’s content server to be “associated.”

Petitioner in Reply alleges that the cookies are associated because “a mobile device must present the cookie to the content server each time it attempts to access the server.” Reply 7. But at deposition, Mr. Schmandt admitted that cookies are stored on the user’s web browser, **not** on the content server:

19 Q. Okay. So Baig has cookies on its content
20 server?

21 A. No, the cookie is information that is stored
22 on a web browser.

Ex. 2008, 25:19-22. Thus, even if a user’s device must **present** the cookie to the server, there is no explanation of how the content server would **determine** cookies to be associated because Baig does not store the cookies on its server.

By way of analogy, a hotel may provide key cards to each of its guests, which allow the guests to enter the business center. Each guest attempting to enter the business center must present her key card to a scanner order to enter. But the scanner does not “determine an association” between any two particular key cards—instead, it just checks to make sure each *individual* key card is valid, and if so, it unlocks the door. Baig’s content server is not alleged to operate any differently—it just checks to make sure the information in the cookie is valid, and if so, it allows the user to access the server. There is thus no need to ***determine an association between*** any two cookies. *See generally* Reply 7-10 (discussing using the cookie for the purpose of determining whether the user is currently logged in—i.e., whether the user is granted access).

Notably, Baig’s operation is different from how the ’878 patent discloses determining an association between cookies. In the specification, “an association or link is crated among the devices, by linking the device identifiers or tags with the STB’s identifier in the CAS database or by placing linking codes or information identifying the linked devices within the identifiers (cookies) of each of the devices.” Ex. 1001, 18:66-19:5. But in Baig’s content server, Mr. Schmandt acknowledged that the cookies are ***not*** stored in a database. Ex. 2008, 25:19-22. And Petitioner does not allege that there would be anything like “linking codes or information identifying

the linked devices” within the cookies themselves—e.g., a cookie on a first device is not alleged to refer to the cookie of another device.

IV. The Petition’s Grounds 3-4 also fail.

For representative claim 6 to be satisfied, the “automatic action” of limitation 1(d) must “comprise[] selecting an advertisement.” POR 29-30. And Petitioner’s expert made clear that he alleged **only** sending of user list information to comprise the claimed “automatic action.”

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.*, 15:1-9 (confirming his opinions were limited to that “automatic action”).

Petitioner in Reply now alleges that “[n]othing in the Petition required that the selected advertisement for claim 6 be delivered separately and independently from the webpage of Figure 6 of Baig that provides user list 606.” Reply 20. This improper new argument fails for at least two reasons.

First, it relates only to “deliver[y]” of the advertisement, not “**selecting**” the advertisement as the claims all require. Reply 20. A POSITA would understand that

an advertisement can be pre-selected, such that even if the **entirety** of Baig’s webpage (including the ad) is delivered every time the user list is automatically updated, that transmission would not require automatically “selecting” the ad.⁹ This is precisely why the claims **separately** recite “selecting” the advertisement and “direct[ing]” the advertisement. *E.g.*, Ex. 1001, claims 6-7, 11, 17-18, 20, 23.

Second, even if “delivery” constituted “selecting” the delivered ad, automatically updating a user list need not involve re-transmitting the *entire* webpage. Indeed, Petitioner’s expert acknowledged that there are methods for changing the user list 606 “independently” from the rest of Baig’s website such that the user list and advertisement would be *separately* transmitted. Ex. 2008, 43:13-44:10. Accordingly, Petitioner cannot show that automatically updating the user list inherently includes delivering an advertisement, and further sets forth no obviousness theory in this regard.

This is an independent reason why claims 6-7, 11-12, 17-18, 20-21, and 23 should be found not unpatentable. POR 35.

⁹ Petitioner’s theory for how the transmission of the user list is “automatic” is limited to **updates** to the user list, not its original transmission when a user first requests it. See Pet. 46-47 (discussing “features for automatically **updating** webpages”).

V. Conclusion

For each of the reasons set forth above and in Patent Owner's Response, all challenged claims should be found not unpatentable.

Date: October 10, 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 SUR-REPLY**, that the amount of words in this paper is 5,577. 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(c)(4) 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 October 10, 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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