

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,
Petitioner,

v.

INTENT IQ, LLC,
Patent Owner.

IPR2022-01315
Patent 10,715,878 B2

Before KRISTEN L. DROESCH, STACEY G. WHITE, and
SCOTT B. HOWARD, *Administrative Patent Judges*.

WHITE, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Roku, Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–23 of U.S. Patent No. 10,715,878 B2 (Ex. 1001, “the ’878 patent”). Paper 2 (“Pet.”). Intent IQ, LLC (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” The following findings of fact and conclusions of law are not final, but are made for the sole purpose of determining whether Petitioner meets the threshold for initiating review.

For the reasons stated below, we determine that Petitioner has not established a reasonable likelihood that it would prevail with respect to any claim challenged in the Petition. We, therefore, deny institution of *inter partes* review.

A. Related Matters

The parties identify the following related district court proceedings: *Roku, Inc. v. AlmondNet, Inc.*, No. 1-21-cv-01035 (D. Del.); *AlmondNet, Inc. v. Roku, Inc.*, No. 6-21-cv-00731 (W.D. Tex.); *AlmondNet, Inc. v. Samsung Elecs. Co.*, No. 6-21-cv-00891 (W.D. Tex.); *AlmondNet, Inc. v. Amazon.com, Inc.*, No. 6-22-cv-01204 (W.D. Tex.); *AlmondNet, Inc. v. Meta Platforms, Inc.*, No. 6-22-cv-01205 (W.D. Tex.); *AlmondNet, Inc. v. Microsoft Corp.*, No. 6-22-cv-01206 (W.D. Tex.); *AlmondNet, Inc. v. Samsung Elecs. Co.*, No. 3-22-cv-07515 (N.D. Cal.). Pet. 1–2; Paper 7, 1. Patent Owner further indicates that the ’878 patent is at issue in *Samsung Electronics Co. v. AlmondNet, Inc.*, IPR2022-01505, which has a pending motion to join this proceeding. Paper 7, 1.

B. The '878 Patent

The '878 patent is titled “Targeted Television Advertisements Based on Online Behavior.” Ex. 1001, code (54). The '878 patent describes delivering targeted television advertisements “based on observed online (i.e., Internet) behavior of a television viewer without employing personally identifiable information.” *Id.* at 1:24–27.

Figure 7 of the '878 patent, showing an exemplary system for serving targeted television advertisements based on a user's online behavior (*id.* at 13:4–5), is reproduced below.

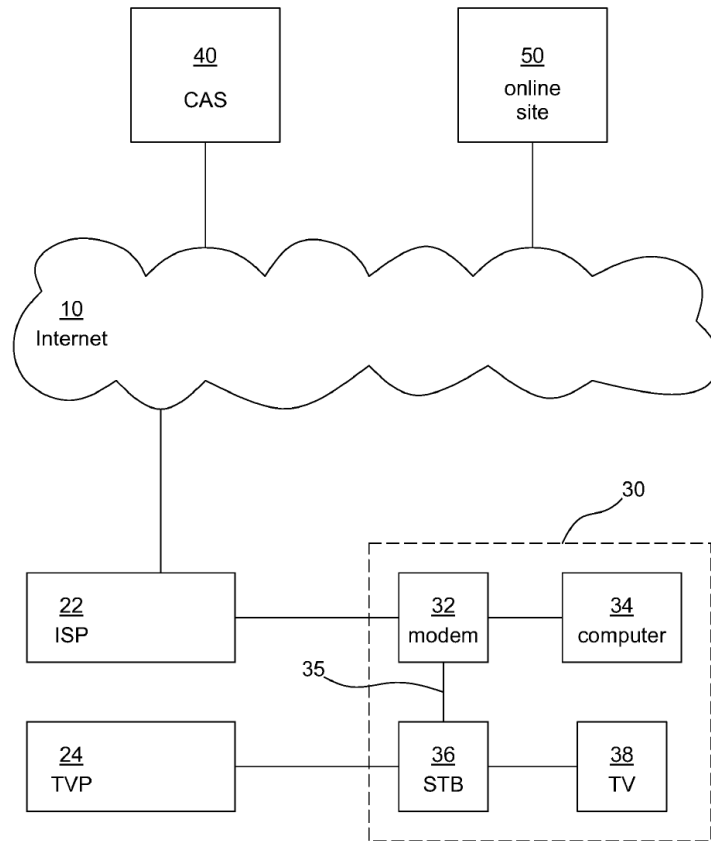


FIG. 7

Figure 7, reproduced above, illustrates modem 32, computer 34, set-top box (STB) 36, and television 38 associated with user 30. *Id.* at 9:38–40, 9:50–

54. Internet service provider (ISP) 22 assigns a dynamic IP address to modem 32. *Id.* at 9:57–61, 13:50–52. In Figure 7, STB 36 is connected to modem 32 via connection 35 to obtain online access via the same IP address at modem 32. *Id.* at 13:17–24. “For example, STB 36 can be connected to a local area network (LAN) that shares [modem] 32 for online access. In such an arrangement, network traffic is routed to a common IP address (i.e., the IP address of modem 32) for STB 36 and other devices [e.g., computer 34] connected to the LAN.” *Id.* at 13:24–46, 13:52–60. “The term ‘common IP address’ denotes the IP address of a modem or other online access device to which remote network traffic is routed for each of multiple devices sharing a common connection.” *Id.* at 13:34–37. “The common IP address is dynamically assigned by ISP 22 to the user’s modem 32 or other online access equipment.” *Id.* at 13:50–52. That common IP address comprises an electronic association between online access and STB IP addresses, which enables delivery of targeted television advertising to STB 36 based on online activity observed as originating from the common IP address of modem 32. *Id.* at 12:37–13:2, 13:17–22, 14:1–8.

C. Illustrative Claim

Claims 1, 13, and 22 are independent. Claim 1 is illustrative and reproduced below.

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.

Ex. 1001, 24:25–62.

D. Asserted Grounds of Unpatentability

Petitioner, supported by the declaration of Dr. Samrat Bhattacharjee (Ex. 1003), asserts the following grounds of unpatentability (Pet. 8)¹:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 5–7, 10, 13, 14, 17–19, 22	103	Madhavan ² , Baum ³ , Harrington ⁴ , Damick ⁵
3, 4, 11, 12, 15, 16, 20, 21, 23	103	Madhavan, Baum, Harrington, Damick, Rankin ⁶
8, 9	103	Madhavan, Baum, Harrington, Damick, Varghese ⁷

II. ANALYSIS⁸

A. Level of Ordinary Skill in the Art

In order to determine whether an invention would have been obvious, we consider the level of ordinary skill in the pertinent art at the critical time. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The resolution of this question is important because it allows us to “maintain[] objectivity in the

¹ We apply the pre-AIA version of 35 U.S.C. § 103 because it appears the claims at issue have an effective filing date prior to March 16, 2013, the effective date of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”). See Ex. 1001, code (60); Pet. 7.

² U.S. Pat. No. 8,180,674 B2, issued May 15, 2012 (Ex. 1008, “Madhavan”).

³ U.S. Pat. No. 7,843,923 B2, issued Nov. 30, 2010 (Ex. 1010, “Baum”).

⁴ U.S. Pat. No. 8,040,819 B2, issued Oct. 18, 2011 (Ex. 1069, “Harrington”).

⁵ U.S. Pat. Pub. 2006/0242294 A1, pub. Oct. 26, 2006 (Ex. 1031, “Damick”).

⁶ U.S. Pat. Pub. 2003/0207685 A1, pub. Nov. 6, 2003 (Ex. 1049, “Rankin”).

⁷ U.S. Pat. No. 7,908,645 B2, issued Mar. 15, 2011 (Ex. 1016, “Varghese”).

⁸ Petitioner argues that discretionary denial is not warranted under 35 U.S.C. §§ 314(a) or 325(d). Pet. 9–13. Because Patent Owner does not argue for discretionary denial, we see no need to consider the issue further.

obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

Petitioner asserts that a person of ordinary skill in the art “would have a bachelor’s or equivalent degree in electrical and/or computer engineering or a related field and 2–3 years of experience in computer and networking systems including online content delivery such as targeted advertisements,” and that “[a] person with less formal education but more experience, or more formal education but less experience, could have also met the relevant standard.” Pet. 7 (citing Ex. 1003 ¶¶ 15–16). Patent Owner does not challenge Petitioner’s description of the level of ordinary skill in the art. Prelim. Resp. 3. For purposes of this Decision, we adopt Petitioner’s description.

B. Claim Construction

In an *inter partes* review proceeding, a patent claim shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. 42.100(b) (2022). Our rule adopts the same claim construction standard used by Article III federal courts, which follow *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny. Under this standard, the words of a claim are generally given their “ordinary and customary meaning,” which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *See Phillips*, 415 F.3d at 1312–13.

Petitioner asserts that “[n]o claim term requires express construction” and that a person of ordinary skill in the art “would apply the ordinary and customary meaning to all claim terms.” Pet. 7 (citing Ex. 1003 ¶ 31). Patent Owner “does not contend that any terms in the challenged claims require

express construction.” Prelim. Resp. 4. We determine that no claim terms require express construction for purposes of this Decision.

C. Overview of the Asserted Prior Art

1. Madhavan (Exhibit 1008)

Madhavan relates to “facilitat[ing] targeting of advertisements based on mutual information sharing between devices over a network, such as the Internet.” Ex. 1008, 1:7–11. Madhavan discloses “network-based content and advertising entity 100 enabling automatic matching of advertising information to events or actions and interests of users.” *Id.* at 4:27–31.

Figure 2 of Madhavan illustrates an exemplary network-based content and advertising entity within a network architecture (*id.* at 4:43–45) and is reproduced below.

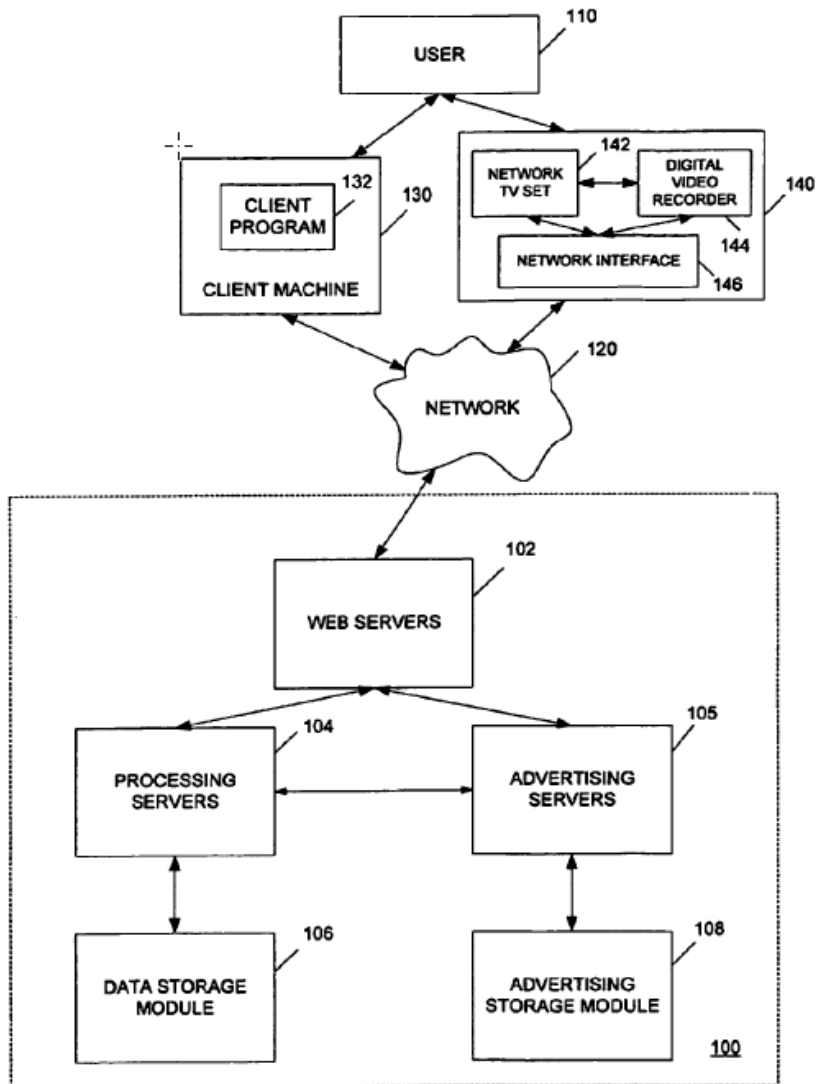


FIG. 2

Figure 2 shows content and advertising entity 100 coupled via network 120 (e.g., the Internet or a local area network (LAN)) to one or more users 110. *Id.* at 4:37–39, 5:10–14. Users 110 are coupled to network 120 through client machine 130 (e.g., a cellular phone) and/or media devices 140 (e.g., network-based television set 142 and/or digital video recording device 144). *Id.* at 4:39–41, 5:3–11, 5:28–36. Network-based advertising entity 100 “enable[s] automatic matching of advertising information to events or actions and interests of users.” *Id.* at 4:28–31. Client machine 130 includes

client program 132, such as a browser, that allows user entity 110 to access advertisement entity 100 by way of network 120, such as for example, the Internet, wide area network (WAN), local area network (LAN), or wireless network. *See id.* at 5:3–15. Media device 140 can include “network-enabled television set 142, such as an Internet TV set” that may or may not be coupled to a digital video recording device, and that communicates with advertisement entity 100. *See id.* at 5:28–32. Alternatively, both the network-based television set 142 and digital video recording device 144 are coupled to network-based advertisement entity 100 via network 120 and a network interface module 146. *See id.* at 5:32–36. Advertisement entity 100 may communicate with other network entities via web server 102 and advertising server 105. *See id.* at 5:18–27, Fig. 2. Another back-end server within network-based advertisement entity 100 is processing server 104, which is coupled to data storage module 106 whereas advertising storage module 108 is coupled to advertising server 105 that stores advertisements to be transmitted and displayed for users over the network 120. *See id.* at 4:57–65. Data storage module 106 may be a database including user tables 210, categories tables 220, and activity tables 230 pertinent to stored data related to the user. *See id.* at 4:61–62, 5:37–40, 5:48–52, Fig. 3.

When a user connects to one or more media devices and performs specific actions, such as, “watch[ing] a broadcast television program on the network-enabled television set or watches a television program which has been previously recorded onto the digital video recording device,” the actions are transmitted to and stored within the advertisement entity “along with respective categories associated with each user action.” Ex. 1008, 1:55–63. Thereafter, when user 110 connects to advertisement entity 100 through client machine 130, advertisement entity 100 selects advertisements

from advertisement storage module 108 that are related to previously stored actions or categories from data storage module 106, for display on client machine 130. *See id.* at 1:64–2:3, 8:34–41, Fig. 6, step: 510. During the login process of user 110 onto client machine 130, processing server 104 of advertisement entity 100 receives “the user identification information such as, for example, the unique IP address and/or password information associated with the user 110,” thereby allowing determination of “classification categories associated with each respective event or action input” by user 110. *Id.* at 8:43–48, 8:57–59. “[A]dvertisements related to the stored user actions or activities and their respective categories are transmitted to the user 110 to be displayed on one or more media devices 140 coupled to the user 110.” *See id.* at 9:4–8, Fig. 6, step: 520.

2. *Baum (Ex. 1010)*

Baum relates to “providing location and other customer information corresponding to an IP address[], including [a] dynamically assigned IP address.” Ex. 1010, code (57). Baum explains that dynamic allocation of IP addresses and re-use of IP addresses complicate correlation of a specific device or a physical location with an IP address. *See id.* at 4:26–32. Baum purports to resolve this problem by using an edge router associated with a table and a “simple look-up table operation.” *See id.* at 5:51–6:9.

Figure 5 of Baum illustrates a communications system (*id.* at 11:42–43) and is reproduced below.

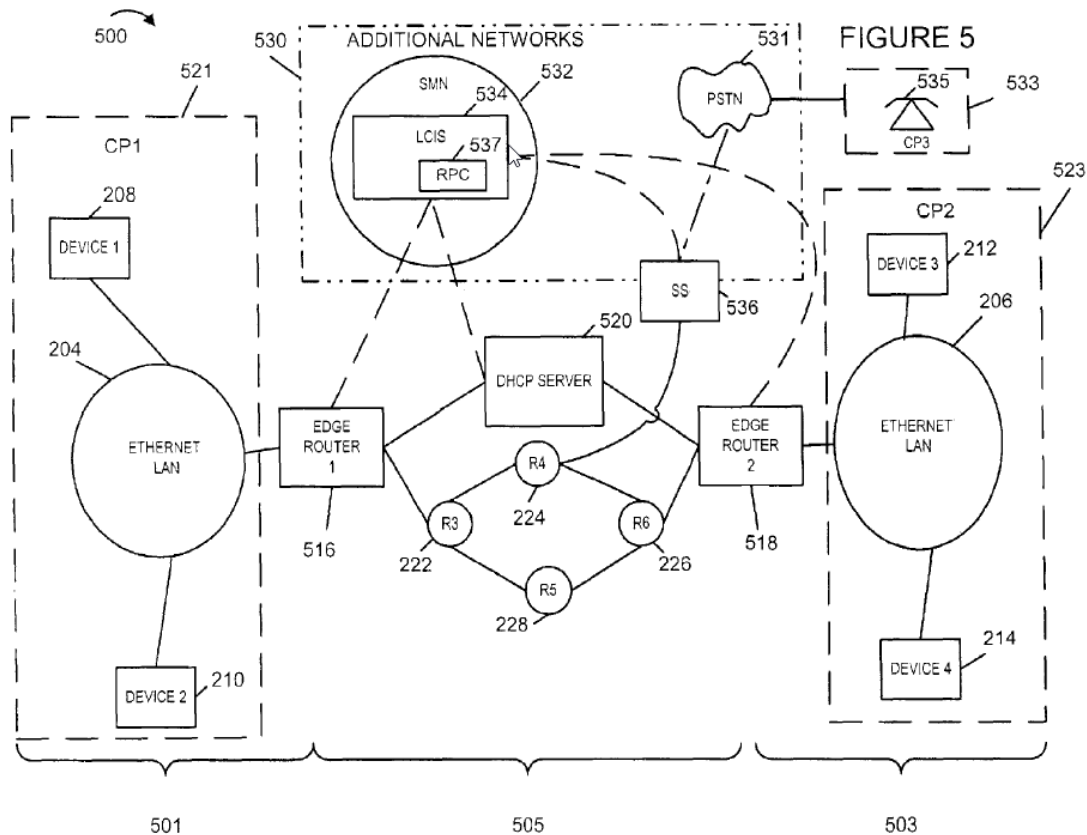


Figure 5 depicts communication system 500 including LAN 501 coupled to LAN 503 via IP-based network 505. *See* Ex. 1010, 12:4–5, 12:24–26. First LAN 501 is located at first customer premise (“CP”) 521 and includes host devices 208, 210. *Id.* at 12:16–18. Second LAN 503 is located at second CP 523 and includes host devices 212, 214. *Id.* at 12:18–21. First and second edge routers 516, 518 serve as the interface between first and second LANs 501, 503, respectively, and IP based network 505. *Id.* at 12:29–31. Baum explains that “LANs tend to be relatively limited geographically, e.g., to a single office or floor of a building. The offices and/or buildings are sometimes referred to as customer premises since the office and/or building is the premise of a communications customer, e.g., an IP service subscriber.” *Id.* at 6:23–27. Baum discloses

A port of an edge router is assigned to serve as a customer's point of access to [the] IP based network. Customer information including the location of the customer premises from which the IP network is accessed through the assigned edge router port is stored in a database associating edge router and port information with customer information. When information about a customer using an IP address is desired a database associating IP addresses with edge routers ... is consulted. The edge router corresponding to the IP address of interest is then contacted to determine the port number associated with the IP address. Recovered edge router and port number information is then used to access the customer information database.

Id. at code (57). Baum explains that “[i]ndividual customers and/or companies with multiple distinct locations e.g., different customer premises, are assigned different edge router ports for each distinct physical location. Thus, each edge router port assigned to a customer in accordance with the invention will correspond to a single physical location.” *Id.* at 6:56–61.

Figure 6 of Baum is reproduced below:

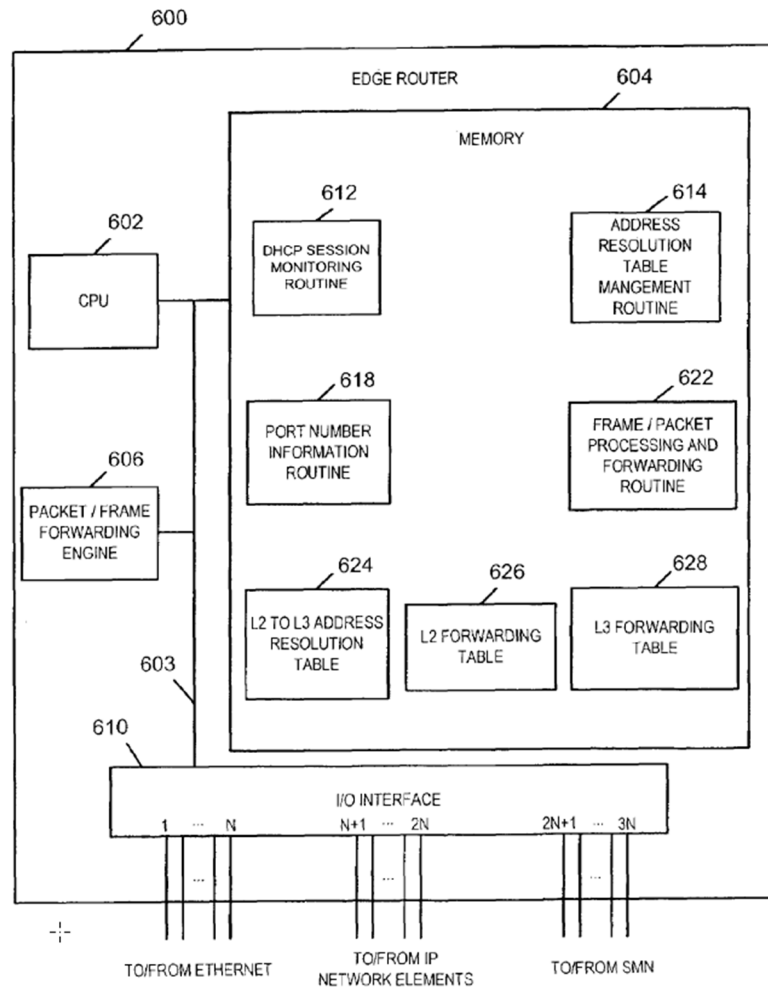


Figure 6 depicts edge router 600. *See* Ex. 1010, 11:44–45, 13:18. Edge router 600 may be used by any one of edge routers 516 or 518 of Figure 5. *See id.* at 13:18–20. Edge router 600 includes CPU 602, packet frame forwarding engine 606, memory 604, and I/O interface 610, which includes a plurality of ports used to connect edge router 600 to various networks. *See id.* at 13:20–24. Ports 1 through N are used to couple edge router 600 to one or more LANs, ports N+1 through 2N are used to connect to elements of IP network 505, and ports 2N+1 through 3N are used to couple edge router 600 to SMN 532 and LCIS 534. *See id.* at 13:24–30. Memory 604 includes L2 forwarding table 626, L3 forwarding table 628, L2 to L3 address resolution

table 624, frame/packet processing forwarding routine 622, DHCP session monitoring routine 612, address resolution table management routine 614, and port number information routine 618. *See id.* at 13:31–36.

Figures 7–9 of Baum are reproduced below.

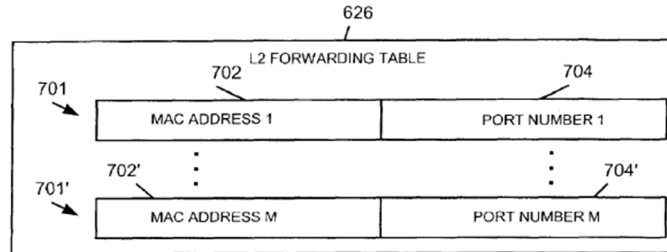


FIGURE 7

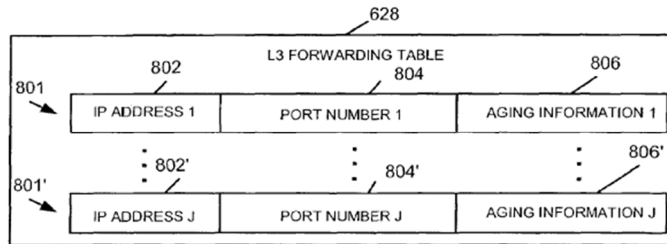


FIGURE 8

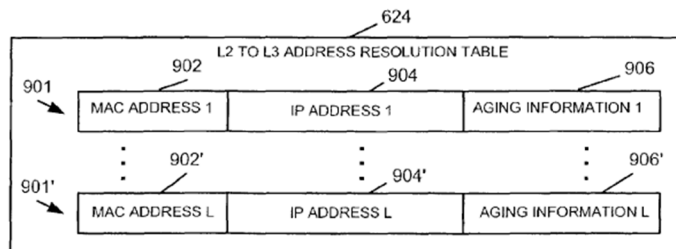


FIGURE 9

Figures 7–9 illustrate L2 forwarding table 626, L3 forwarding table 628, and L2 to L3 address resolution table 624, respectively. *See Ex.* 1010, 11:46–47, 13:40, 13:50–52, 13:62–64. Layer 2 forwarding table 626 includes information for forwarding received Ethernet frames according to the MAC destination address in the frame's header. *See id.* at 13:37–39. Table 626 includes a plurality of entries 701, 701' which includes MAC address 702, 702' and port numbers 704, 704'. *See id.* at 13:41–43. Under the direction of forwarding routine 622, frames received by the edge router

having a MAC address listed in L2 forwarding table 626 are output using the port 704, 704' corresponding to the destination MAC address 702, 702'. *See id.* at 13:43–46, 14:51–56. Layer 3 forwarding table 628 is used by an edge router “to forward IP packets in the IP domain.” *See id.* at 13:49–50.

Layer 3 forwarding table 628 includes entries 801, 801' which include IP addresses 802, 802', port numbers 804, 804', and aging information 806, 806', respectively. *See id.* at 13:51–53. Under the direction of a forwarding routine, IP packets received by the edge router having a MAC address listed in the L2 forwarding table 626 (Fig. 7) are output using port 804, 804' corresponding to the destination IP address. *See id.* at 13:56–60; *see also id.* at 14:46–56 (describing use of L2 forwarding table 626 in port number identification routine 618). L2 to L3 address resolution table 624, is used for converting between Layer 2 (e.g., MAC addresses) and Layer 3 (e.g., IP addresses) and includes a plurality of entries 901, 901', each including MAC address 902, 902', IP address 904, 904', and aging information 906, 906', respectively. *See id.* at 13:62–67; *see also id.* at 14:46–63 (describing use of L2 to L3 address resolution table 624 in port number identification routine 618). An address resolution table management routine 614 is used for deleting entries from L2 to L3 address resolution table 624 and L3 forwarding table 628 “after an entry has aged for a preselected period of time as indicated from the aging information stored for each entry.” *Id.* at 14:31–35; *see id.* at 13:53–56, 13:67–14:2, 14:31–35.

3. *Harrington (Ex. 1069)*

Harrington relates to electronic communication over a network. Ex. 1069, 1:8–9. Figure 1 of Harrington is reproduced below.

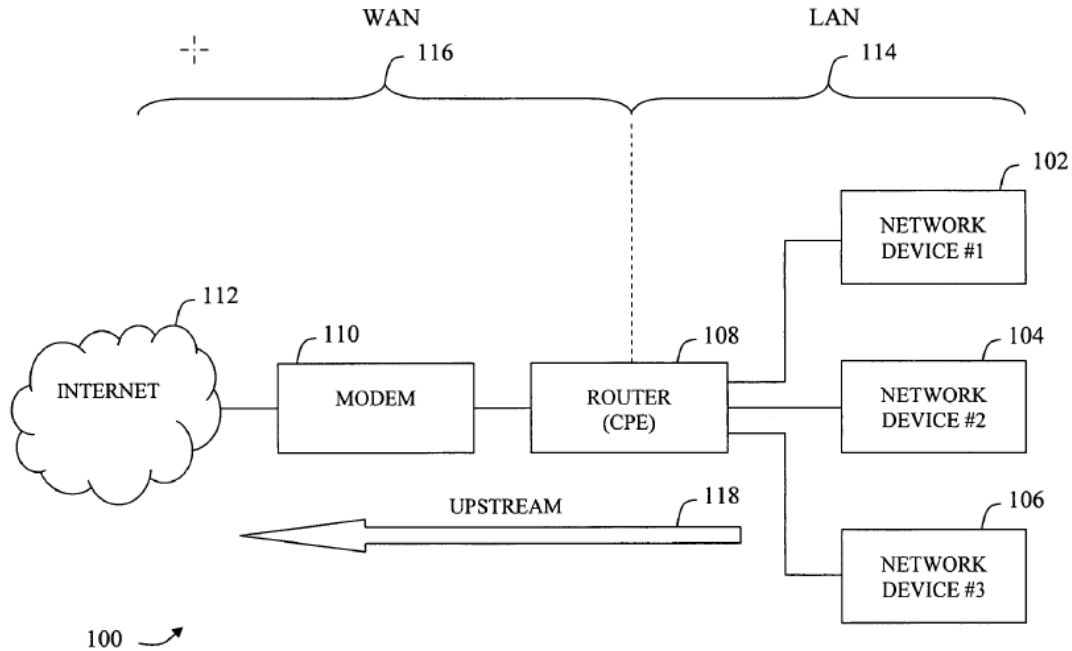


FIG. 1

As shown in Figure 1, Harrington discloses network 100 in which modem 110 is connected upstream of router 108 between Internet 112 and network devices 102, 104, 106. Ex. 1069, 3:6–39. Router 108 is a connection point between LAN 114 and WAN 116. *Id.* at 3:22–25.

4. *Damick (Ex. 1031)*

Damick discloses logging dates and times a computer has accessed a particular website. Ex. 1031 ¶¶ 21, 69.

5. *Rankin (Ex. 1049)*

Rankin discloses a server, which stores a user profile database, collecting a user's behavioral data from a portable communications device via a service provider and telecommunications network. Ex. 1049 ¶¶ 25–26.

6. *Varghese (Ex. 1016)*

Varghese discloses using cookies or IP addresses as device identifying information. Ex. 1016, 25:7–53, 32:36–42.

*D. Obviousness Over Madhavan, Baum,
Harrington, and Damick*

Petitioner asserts that claims 1, 2, 5–7, 10, 13, 14, 17–19, and 22 are unpatentable under 35 U.S.C. § 103 as obvious over Madhavan, Baum, Harrington, and Damick, citing the Declaration of Dr. Samrat Bhattacharjee for support. Pet. 14–81 (citing Ex. 1003).

1. Independent Claims 1, 13, and 22

Petitioner asserts and we agree that independent claims 1, 13, and 22 recite “substantially identical” subject matter. Pet. 13. Petitioner provides a detailed analysis of its challenge to claim 1 as unpatentable over the cited references (*see id.* at 31–68) and relies on those same arguments and evidence in its challenge to claims 13 and 22 (*see id.* at 77–80). As such, we address the sufficiency of Petitioner’s challenges to independent claims 1, 13, and 22 together.

Petitioner’s challenges to these three claims all fail for the same reason, an insufficient factual showing to support its allegations regarding the recited common local area network (“LAN”). Claim 1’s preamble states in relevant part “[a] method for identifying an association among multiple electronic devices of a group of devices connected through *a common local area network* (LAN)⁹ and using the association for cross-device action.” Ex. 1001, 24:25–28 (emphasis added). The preamble’s common LAN

⁹ Claim 13, like claim 1, recites a “common local area network” and substantially identical limitations to those discussed above in regards to claim 1. (Ex. 1001, 25:53, 26:6–9). Claim 22, however, does not use the term “common LAN.” We are persuaded that claim 22’s LAN is a common LAN because as with claims 1 and 13 the recited “two or more Internet-accessing electronic devices” each must access the Internet “through a router of *the LAN*.” *Id.* at 27:34–28:2.

provides antecedent basis for all of the claim’s other recitations of “the LAN.” For example, the clause Petitioner labeled [1.2] (b) recites, in relevant part, “determine that the two or more Internet-accessing electronic devices have separately accessed the Internet through the router of *the LAN* during a predetermined period of time via a common IP address.” *Id.* at 24:46–49 (emphasis added).

According to Petitioner, “Baum¹⁰ discloses techniques for identifying devices within a common LAN (e.g., devices 208, 210 on LAN 501) with dynamically (DHCP) assigned IP addresses, as shown in FIG. 5.” Pet. 38. Baum’s Figure 5, depicts, in relevant part, Devices 1 and 2 (208, 210) that are connected to Ethernet LAN 204 and that Ethernet LAN 204 is connected to Edge Router 1 (516). *See* Ex. 1010, Fig. 5. Baum indicates that the LAN is located at single customer premises, which corresponds to a single location such as an office building or home. *Id.* at 12:20–24. Petitioner asserts that “Baum associates IP addresses of devices of a common LAN by automatically recognizing that the devices are coupled to a common edge router by means of the port number of that edge router, where the {edge router, port number} combination corresponds to a single LAN.” Pet. 19.

We are not persuaded, however, that Baum’s disclosures support Petitioner’s assertions. Petitioner directs us to Baum’s Figure 8, which is reproduced below. *Id.* at 20.

¹⁰ Petitioner relies upon a combination of references to teach the totality of the claim limitations. Baum, however, is specifically relied upon to teach the common LAN. *See* Pet. 24–25.

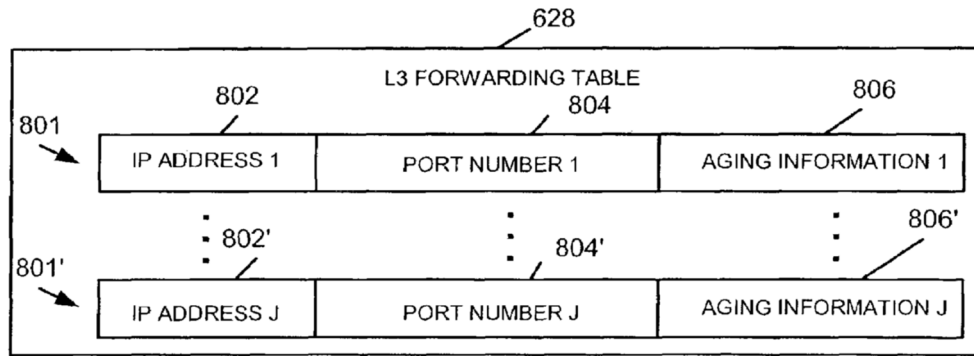
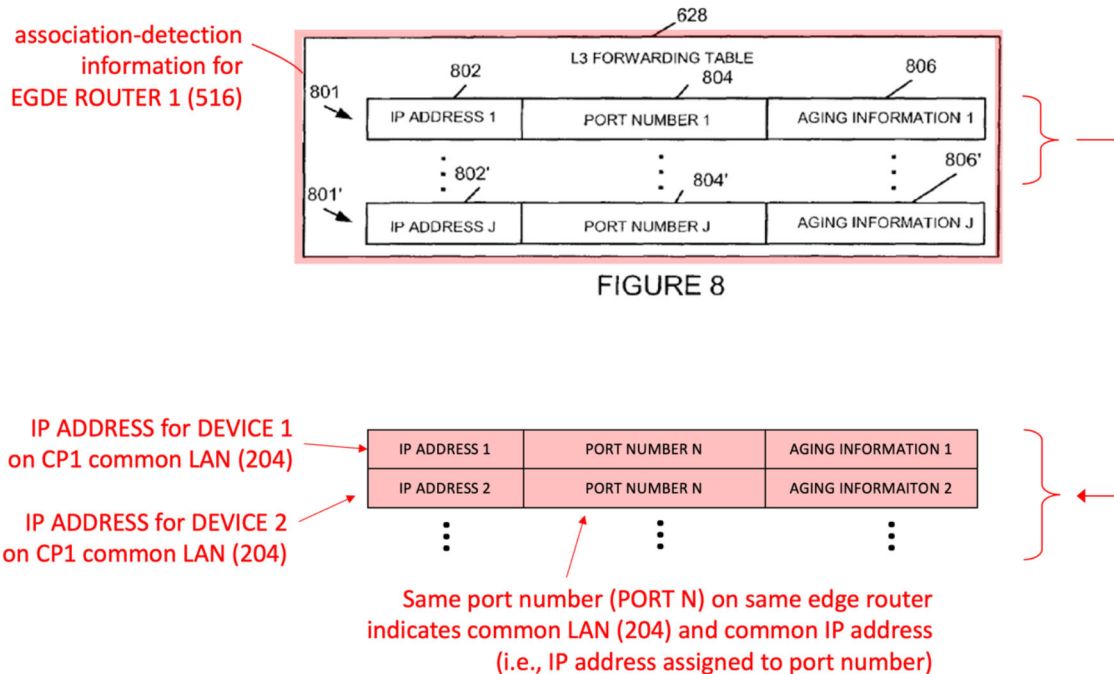


FIGURE 8

Figure 8 depicts Baum’s L3 forwarding tables. Ex. 1010, 13:50–51. Baum uses L2 and L3 forwarding tables along with an L2 to L3 resolution table to assist with routing packets. *Id.* at 13:31–33, 14:3–20. Each L3 table entry “includes an IP address 802, 802’, a port number 804, 804’ and aging information 806, 806.” *Id.* at 13:52–53. Figure 8, however, does not include any reference to multiple IP addresses being co-located at the same location or port number.

In the absence of evidence showing that Baum taught or suggested using the L3 tables to determine that two devices are co-located at a common LAN, Petitioner’s declarant, Dr. Bhattacharjee created two additional rows for Figure 8 illustrating how table L3 could be used to indicate the co-location of devices on the same LAN. Dr. Bhattacharjee’s annotated Figure 8 is reproduced below.



Dr. Bhattacharjee stated that the two additional rows shown above were added to depict “IP address 1 (e.g., address A.B.C.2) for device 1 (e.g., device 208) on CP1 common LAN 204 being associated with port number N of edge router 516, and IP address 2 (e.g., address A.B.C.3) for device 2 (e.g., device 210) on CP1 common LAN 204 also being associated with port number N of edge router 516.” Ex. 1003 ¶ 46. These demonstrative rows were added by Dr. Bhattacharjee to Baum’s Figure 8 in order to depict the L3 table as showing that device 1 and device 2 are associated with the same edge router and thus, connected to a common LAN. *Id.*

We, however, are not persuaded that one of ordinary skill in the art would have learned this from Baum’s disclosures. As Patent Owner points out, nowhere does “Baum describe recognizing an *association* between *two different* IP addresses.” Prelim. Resp. 17. Patent Owner goes on to correctly describe Baum as performing a series of look ups in order to associate a customer’s IP address with the specific information about the

device using that IP address, such as its location, customer's name, or the device's MAC address. *Id.* at 19. Baum does not teach or suggest using any of its tables to determine whether any two devices share a connection with a common LAN. Petitioner has not provided evidence sufficient to persuade us that one of ordinary skill in the art would have read Baum disclosures to suggest using any of Baum's packet forwarding tables to identify other devices that are connected to the same LAN.

Petitioner relies upon several passages from Baum to support its arguments. *See* Pet. 57–58. We, however, are not persuaded that these passages are sufficient to show that one of ordinary skill in the art would have read Baum to suggest determining whether devices were on a common LAN. First, Petitioner directs us to Baum's teaching of correlating a LAN to a customer premises. *Id.* (citing Ex. 1010, 6:23–27). "LANs tend to be relatively limited geographically, e.g., to a single office or floor of a building. The offices and/or buildings are sometimes referred to a customer premises." Ex. 1010, 6:23–27. Second, Petitioner directs us to Baum's disclosure of correlating an edge router port number to a customer premise. *Id.* (citing Ex. 1010, 6:56–61). "Individual customers and/or companies with multiple distinct locations e.g., different customer premises, are assigned different edge router ports for each distinct physical location. Thus, each edge router port assigned to a customer in accordance with the invention will correspond to a single physical location." Ex. 1010, 6:56–61. In our view, these passages support the notion that each device may be mapped to location, but we are not persuaded that these passages to provide a teaching or suggestion to one of ordinary skill in the art to determine that any two devices are connected to a common LAN.

Finally, we are left with Dr. Bhattacharjee’s testimony. Dr. Bhattacharjee repeats verbatim the assertion in the Petition that “Baum associates IP addresses of devices of a common LAN by automatically recognizing that the devices are coupled to a common edge router by means of the port number of that edge router, where the {edge router, port number} combination corresponds to a single LAN.” Ex. 1003 ¶ 45 (citing Ex. 1010, 6:23–27, 6:56–61) *compare* Pet. 19 (citing Ex. 1010, 6:23–27, 6:56–61). Dr. Bhattacharjee annotates Baum Figure 8 in an effort to add rows that would show devices 1 and 2 “are both associated with the same edge router (e.g., LAN 204) and thus are connected to the same LAN because device 1 (IP address 1) and device 2 (IP address 2) are connected to the same edge router port number (Port N).” Ex. 1003 ¶ 46. Finally, Dr. Bhattacharjee concludes that

Baum recognizes that particular device IP addresses connect to an IP-based network (the Internet) via a particular edge router (and particular port thereof) and thereby determines that multiple devices are connected to a common LAN and would access the Internet via a common IP address and edge router port via which devices of the common LAN connect to the Internet.

Id. ¶ 48 (citing Ex. 1010, 6:46–66).

The Supreme Court has cautioned that we “should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (citing *Graham*, 383 U.S. at 36 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “guard against slipping into use of hindsight” (quoting *Monroe Auto Equip. Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (6th Cir. 1964))). In addition, our precedent requires us to be

particularly cautious when conclusory expert testimony is being used to supply a limitation missing from the prior art. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 12 at 5(PTAB. Aug. 24, 2022) (precedential). We are not persuaded that Dr. Bhattacharjee's testimony is sufficient to show that Baum would have taught or suggested to one of ordinary skill in the art at the critical time the common LAN limitation. We have reviewed the specific passages undergirding Dr. Bhattacharjee's testimony and do not find them to be sufficient to establish that one of ordinary skill in the art would have had the understanding espoused by Dr. Bhattacharjee's testimony. As discussed above, the cited passages do not suggest using the forwarding tables in the manner discussed in Dr. Bhattacharjee's testimony.

Thus, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 1, 13, and 22 are unpatentable under § 103 as obvious over Madhavan, Baum, Harrington, and Damick.

2. Dependent Claims 2, 5–7, 10, 14, and 17–19

Petitioner accounts for the limitations recited in claims 2, 5–7, 10, 14, and 17–19. Pet. 68–81. Petitioner's allegations against these claims however all contain the same deficiency noted above for the independent claims from which these claims depend. As such, Petitioner's challenges to the dependent claims also are insufficient for the reasons noted above.

Thus, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 2, 5–7, 10, 14, and 17–19 are unpatentable under § 103 as obvious over Madhavan, Baum, Harrington, and Damick.

*E. Obviousness Over Madhavan, Baum,
Harrington, Damick, and Rankin*

Petitioner asserts that claims 3, 4, 11, 12, 15, 16, 20, 21, and 23 are unpatentable under 35 U.S.C. § 103 as obvious over Madhavan, Baum, Harrington, Damick, and Rankin, citing the Declaration of Dr. Bhattacharjee for support. Pet. 81–89 (citing Ex. 1003). Petitioner’s allegations against these claims however all contain the same deficiency noted above for the independent claims from which these claims depend. As such, Petitioner’s challenges to the dependent claims also are insufficient for the reasons noted above.

Thus, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 3, 4, 11, 12, 15, 16, 20, 21, and 23 are unpatentable under 35 U.S.C. § 103 as obvious over Madhavan, Baum, Harrington, Damick, and Rankin

*F. Obviousness Over Madhavan, Baum,
Harrington, Damick, and Varghese*

Petitioner asserts that claims 8 and 9 are unpatentable under 35 U.S.C. § 103 as obvious over Madhavan, Baum, Harrington, Damick, and Varghese, citing the Declaration of Dr. Bhattacharjee for support. Pet. 89–94 (citing Ex. 1003). Petitioner’s allegations against these claims however all contain the same deficiency noted above for the independent claims from which these claims depend. As such, Petitioner’s challenges to the dependent claims also are insufficient for the reasons noted above.

Thus, we are not persuaded that Petitioner has established a reasonable likelihood of prevailing on its assertion that claims 8 and 9 are unpatentable under 35 U.S.C. § 103 as obvious over Madhavan, Baum, Harrington, Damick, and Varghese.

III. CONCLUSION

For the foregoing reasons, we have determined that Petitioner has not established a reasonable likelihood of prevailing with respect to any claims. Thus, we do not institute an *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is denied, and no *inter partes* review is instituted.

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