

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

XR COMMUNICATIONS, LLC D/B/A VIVATO TECHNOLOGIES,
Patent Owner.

IPR2022-00958
Patent 8,289,939 B2

Before BARBARA A. PARVIS, TERRENCE W. McMILLIN, and
JAMES J. MAYBERRY, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

Cisco Systems, Inc. (“Petitioner”) filed a Petition (Paper 2 (“Pet.”)) requesting an *inter partes* review of claims 15–22 and 30–35 (“challenged claims”) of U.S. Patent. No. 8,289,939 B2 (Ex. 1001, “the ’939 patent”) pursuant to 35 U.S.C. §§ 311–319, along with the supporting Declaration of Kevin Jeffay, Ph.D. (Ex. 1003). Patent Owner filed a Preliminary Response (Paper 6, “Prelim. Resp”).¹ With our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response (“Reply,” Paper 7) and Patent Owner filed a Sur-reply (“Sur-reply,” Paper 8).

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4.

Upon consideration of the contentions and the evidence of record, we conclude Petitioner does not establish a reasonable likelihood of prevailing in demonstrating the unpatentability of any of the challenged claims of the ’939 patent. Accordingly, we do not institute an *inter partes* review.

II. BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies itself as the real party-in-interest. Pet. 59. Patent Owner also identifies itself as the real party-in-interest. Paper 4, 2.

B. *Related Matters*

Each party identifies judicial matters that would affect, or be affected by, a decision in this proceeding. In particular, the parties inform us that the ’939 patent is asserted in the following district court proceedings: *XR Communications, LLC, dba Vivato Technologies v. Cisco Systems, Inc., et*

¹ We excused Patent Owner’s one-day late filing of its Preliminary Response. Ex. 3001.

al, Case No. 6:21-cv-00623 (W.D. Tex.); *XR Communications, LLC, dba Vivato Technologies v. Netgear, Inc.*, Case No. 8:21-cv-01064 (C.D. Cal.); *XR Communications, LLC, dba Vivato Technologies v. Netgear, Inc.*, Case No. 2:21-cv-04942 (C.D. Cal.); *XR Communications, LLC, dba Vivato Technologies v. Aruba Networks, LLC*, Case No. 2:21-cv-04912 (C.D. Cal); and *XR Communications, LLC, dba Vivato Technologies v. Ruckus Wireless, Inc.*, Case No. 3:21-cv-04679 (N.D. Cal). Pet. 59; Paper 4, 2.

C. The '939 Patent

The '939 patent relates to the coordination of signals being communicated across one or more media to prevent the thrashing of signals (*e.g.*, packets) by coordinating the release of downlink packets with the reception of uplink packets using a media access control (MAC)-type mechanism. Ex. 1001, 1:27–33. Figure 1, below, shows wireless communications environment 100. *Id.* at 3:25–26.

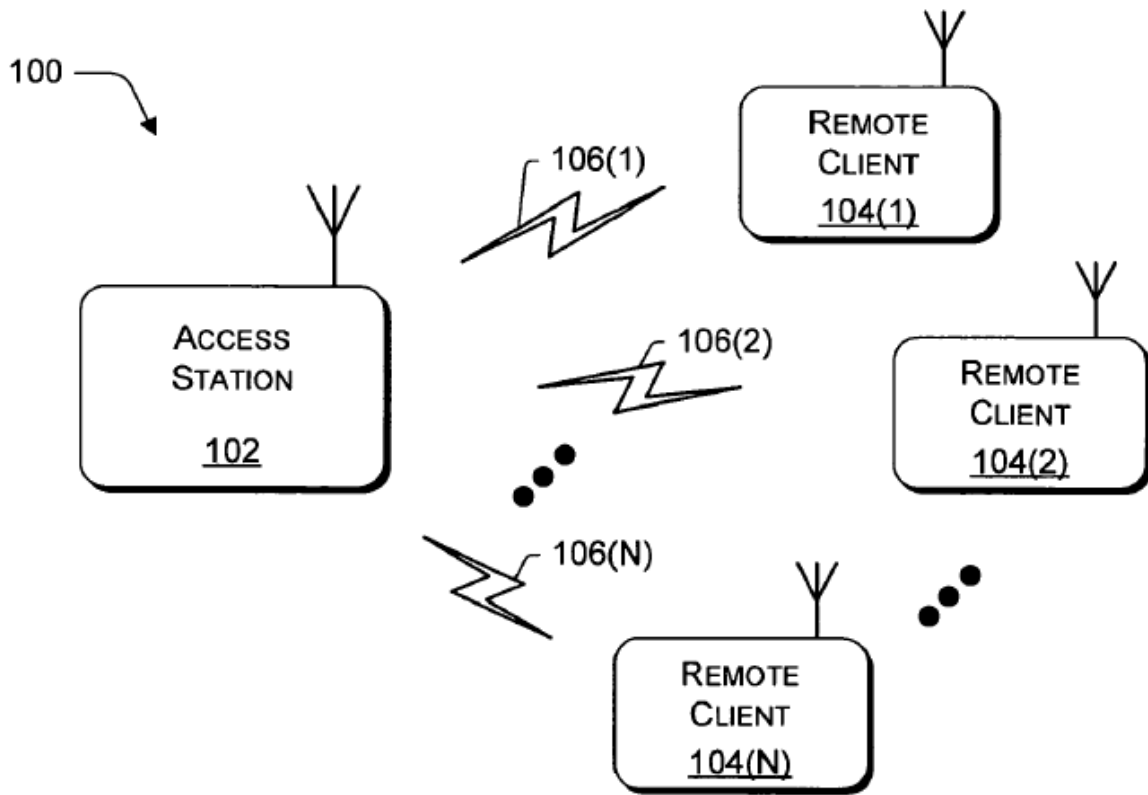


Fig. 1

Figure 1, above, illustrates wireless communications environment 100, including access station 102 in wireless communication with remote clients 104(1), 104(2) . . . 104(N) via communication links 106(1), 106(2) . . . 106(N), respectively. *Id.* at 3:25–26, 3:35–38. Access station 102 and remote clients 104 may operate in accordance with any Institute of Electrical and Electronics Engineers (IEEE) 802.11 or similar standard. *Id.* at 3:47–50.

Figure 2, below, shows LAN/WAN communications environment 200. *Id.* at 4:4–5.

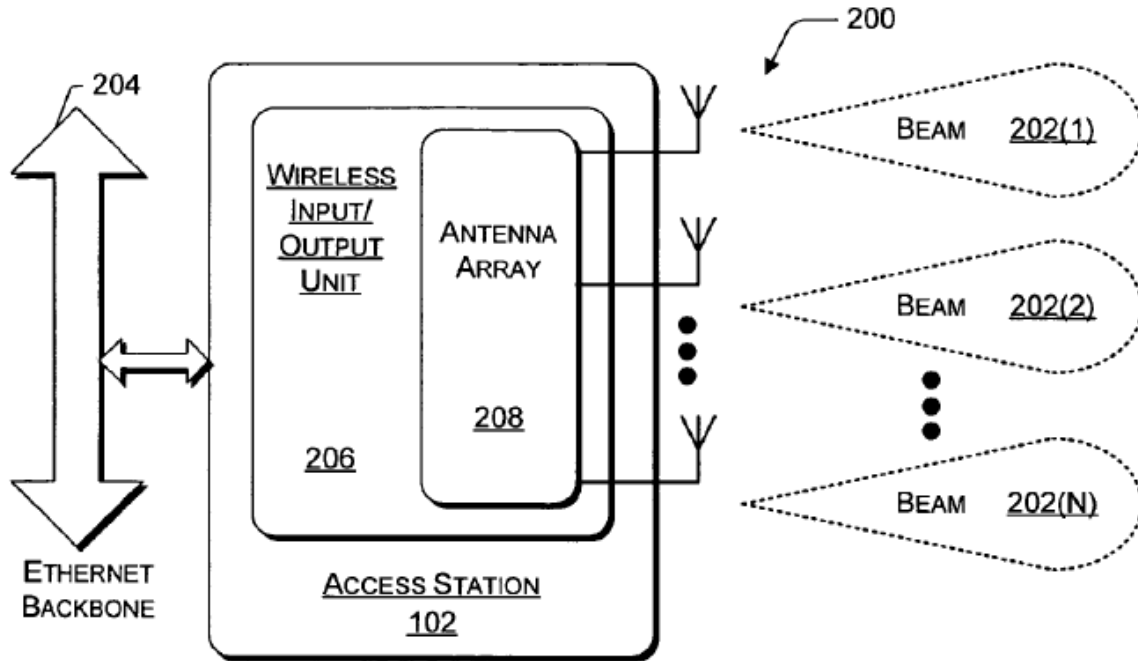


Fig. 2

Figure 2, above, illustrates wireless LAN/WAN communications environment 200 that includes access station 102, wireless input/output (I/O) unit 206, antenna array 208, and multiple communication beams 202. *Id.* at 4:4–7.

Access station 102 includes wireless I/O unit 206. *Id.* at 4:17. Wireless I/O unit 206 includes antenna array 208 that is implemented as two or more antennas, and optionally as a phased array of antennas. *Id.* at 4:17–20. Wireless I/O unit 206 transmits and receives signals via antenna array 208 to remote clients 104. *Id.* at 4:20–25.

In wireless communication, signals may be sent from a transmitter to a receiver using electromagnetic waves (*i.e.*, beams) that emanate from one or more antennas as focused in one or more desired directions via any number of active and passive beamformers. *Id.* at 4:28–42. By using such a beamformer along with antenna array 208, multiple communication beams

202(1), 202(2) . . . 202(N) may be produced by wireless I/O unit 206. *Id.* at 4:44–46.

Figure 4, below, shows an access station 102. *Id.* at 5:30.

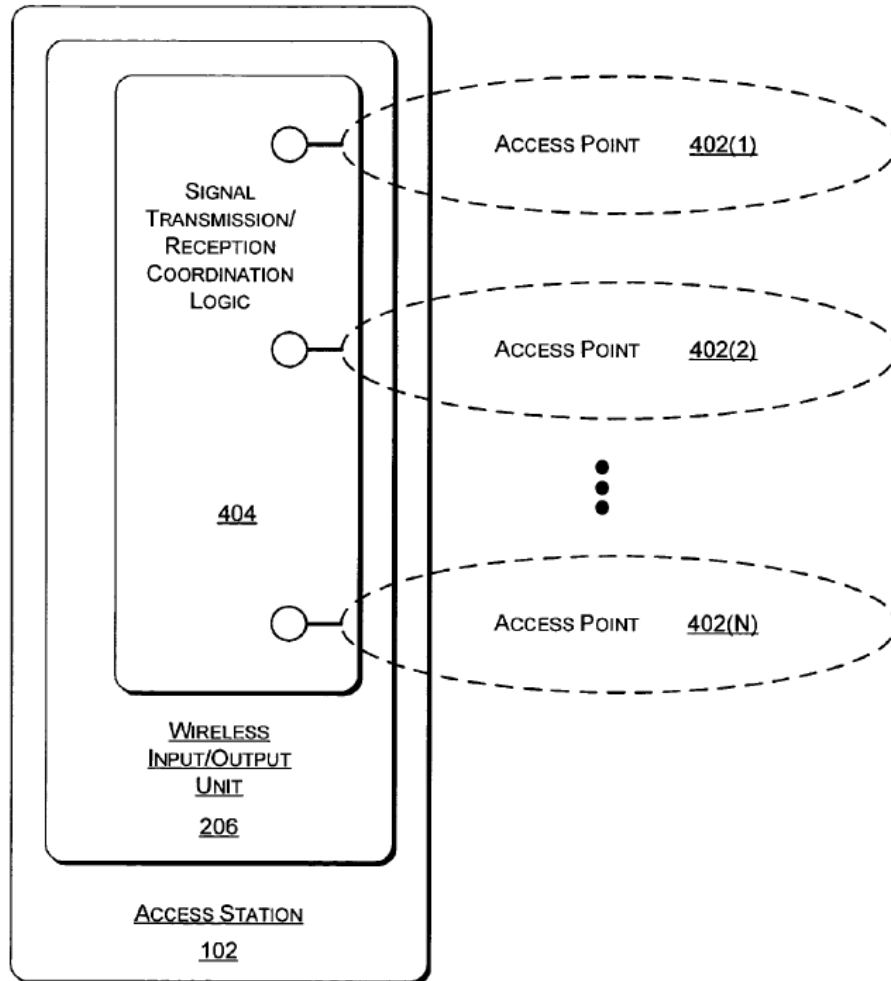


Fig. 4

Figure 4, above, illustrates access station 102 that includes wireless I/O unit 206 having signal transmission/reception coordination logic 404. *Id.* at 5:30–35.

Wireless I/O unit 206 establishes two or more access points 402, such as multiple access points 402(1), 402(2) . . . 402(N). *Id.* at 5:38–40. Signal

transmission/reception coordination logic 404 may be implemented as hardware, software, firmware, or some combination thereof. *Id.* at 5:33–38. Signal transmission/reception coordination logic 404 coordinates uplink signal receptions and downlink signal transmissions across different access points 402. *Id.* at 5:58–61.

D. Illustrative Claim

Petitioner challenges claims 15–22 and 30–35 of the '939 patent. Pet. 1–2. Claims 15 and 30 are independent claims. Claims 16–22 depend, directly or indirectly, from claim 15. Claims 31–35 depend, directly or indirectly, from claim 30. Independent claim 15, reproduced below, is illustrative of the subject matter.

15. [15P]² An apparatus comprising:

[15A] a wireless input/output (I/O) unit that is configured to establish a plurality of access points: and

[15B.1] signal transmission/reception coordination logic that is capable of ascertaining, by monitoring the plurality of access points for received signals, that:

[15B.1a] a first access point of the plurality of access points is receiving a first signal on a first channel,

[15B.1b] a second access point of the plurality of access points is receiving a second signal that is ongoing on a second channel, [15B.2] the signal transmission/reception coordination logic adapted to restrain at least a third access point of the plurality of access points from transmitting a third signal on a third channel responsive to the ascertaining that the first access point is receiving the first signal and that the second access point is receiving the second signal that is ongoing-on the second channel,

² Petitioner's designations to reference the elements of claim 15 are set forth in brackets. Pet. 61. Herein we refer to the elements of claim 15 using Petitioner's designations.

[15C] wherein the restraining at least the third access point prevents degradation to the first and second signals.

Ex. 1001, 20:28–47.

E. Evidence

Petitioner relies on the patent document reference in the table below.

Name	Patent Document	Exhibit
Kasami	US 7,158,501 B2, issued January 2, 2007	1005

F. Asserted Grounds

Petitioner asserts that the challenged claims of the '939 patent are unpatentable based on the following ground below (Pet. 2):

Claim(s) Challenged	35 U.S.C. §	Reference/Basis
15–22, 30–35	103(a) ³	Kasami

III. ANALYSIS

A. Legal Standards

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art;

³ The '939 patent was filed November 3, 2003. Ex. 1001, code (22). Based on the apparent effective filing date of the challenged claims of the '939 patent, the AIA versions of 35 U.S.C. §§ 102 and 103 do not apply. Our analysis would not change under the AIA versions of §§ 102, 103.

(3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art at the time of the invention would have been “a person familiar with wireless communications networks and equipment and would have had at least a working knowledge of the protocols and architectures of common wireless communications networks at the time; and an understanding of the components and subsystems within available wireless communication equipment.” Pet. 9. Petitioner further asserts a person of ordinary skill in the art at the time of the invention would have had “at least a Bachelor’s degree in Electrical Engineering or a related field, and three to four years of work experience in wireless communications, or a Master’s degree and at least two years of work experience in wireless communications.” Pet. 9–10. Patent Owner does not oppose Petitioner’s proposal. Prelim. Resp. 5–6.

We find that the phrase “at least” in Petitioner’s proposed definition creates a vague, open-ended upper bound for the level of ordinary skill, and we therefore do not adopt that aspect of the proposal. With that exception, considering the subject matter of the ’939 patent, the background technical field, and the asserted prior art, we otherwise agree with Petitioner’s proposed qualifications for an ordinary level of skill. Petitioner’s proposed definition is consistent with the level of skill reflected in the Specification of the ’939 patent and the asserted prior art reference. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

⁴ Patent Owner does not present objective evidence of nonobviousness.

Accordingly, we adopt Petitioner’s assessment of the level of skill for one of ordinary skill in the art, with the “at least” phrase omitted.

C. Claim Construction

We construe the challenged claims by applying the standard used in federal courts, in other words, “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b),” which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2020). Under this standard, the words of a claim generally are 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. *Phillips*, 415 F.3d at 1312–13.

The parties dispute whether “signal transmission/reception coordination logic” is a means-plus-function limitation that should be construed under 35 U.S.C. § 112, ¶ 6. Pet. 6–9; Prelim. Resp. 6–7. We discuss that dispute here. To the extent the parties provide further contentions regarding claim construction (*see, e.g.*, Pet. 19 (asserting that “in the ’939 patent, an ‘access point’ is defined relative to a directed communication beam 202”)), we discuss those contentions below in our analysis of whether the prior art meets the claim limitations.

Turning to “signal transmission/reception coordination logic” recited in claims 15 and 30, Petitioner contends the term should be construed under 35 U.S.C. § 112, ¶ 6, consistent with the construction in co-pending litigation in the Central District of California involving different parties. Pet. 6–8 (citing, *e.g.*, Ex. 1013, 8–10; Ex. 1014, 44–59). Petitioner contends it identifies “the specified function for each limitation.” *Id.* at 8 (citing Ex. 1013, 8–10; Ex. 1014, 57–58). Petitioner additionally contends the Judge

in the co-pending litigation, “adopting the findings of the Special Master[,] found that the corresponding structure for these limitations is ‘signal transmission/reception coordination logic 404 (with the characteristics and configuration set forth for the signal transmission/reception coordination logic 404 in the ’939 patent), and equivalents thereof.’” *Id.* at 8–9 (citing Ex. 1013, 8–10; Ex. 1014, 59).

Patent Owner contends “[i]n construing this patent, the U.S. District Court for the Western District of Texas did not adopt the construction proposed by Petitioners here.” Prelim. Resp. 6. Patent Owner contends that the Board does not need to construe any terms (including “signal transmission/reception coordination logic”) for purposes of its institution decision. *Id.* at 6–7. Patent Owner additionally contends, “[s]hould the Board elect to construe the claim term ‘signal transmission/reception coordination logic,’ the proper construction is the one adopted by the Western District of Texas: plain and ordinary meaning, as the term does not invoke means-plus-function treatment.” *Id.* at 7. Patent Owner further contends, “should the Board find that means-plus-function applies, then Patent Owner agrees with Petitioner that the Board should adopt the construction that was adopted by the Central District of California.” *Id.*

Petitioner does not contend that its proposed construction is broader than the ordinary and customary meaning of the claim term. Pet. 6–9. As will be discussed below, we find the Petition deficient using the ordinary and customary meaning of the claim language. *See* § III.D. For purposes of this decision, therefore, we need not provide further analysis of the construction of “signal transmission/reception coordination logic,” as our ultimate determination would be the same under either construction. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed.

Cir. 2017)), *cert. denied*, 138 S. Ct. 1695 (April 30, 2018) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

D. Unpatentability of Claims 15–22 and 30–35 under 35 U.S.C. § 103(a) as Obvious over Kasami

Petitioner asserts that claims 15–22 and 30–35 are unpatentable as obvious over Kasami. Pet. 2. Patent Owner disputes Petitioner’s showing. Prelim. Resp. 11–22. We begin with an overview of Kasami. We then turn to the parties’ contentions.

1. Kasami

Kasami describes a wireless system in which space division multiplexing access (SDMA) is applied. Ex. 1005, 5:50–51. Figure 1, below, shows a wireless LAN system. *Id.*

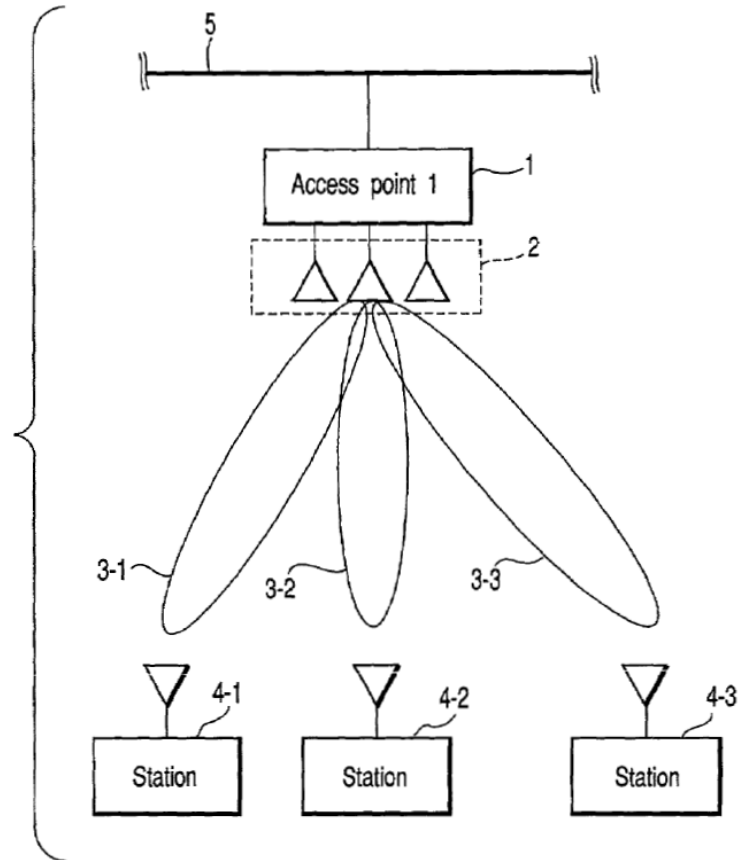


FIG. 1

Figure 1, above, shows a wireless LAN system including access point 1 that communicates with plurality of stations 4-1 through 4-3. *Id.* at 5:50–65.

Access point 1 is installed in a specific fixed location, and is connected to backbone network 5. *Id.* at 5:55–57. Access point 1 comprises adaptive array antenna 2. *Id.* at 5:57–58. Adaptive array antenna 2 generates plurality of radio waves 3-1 to 3-3 (i.e., antenna beams) with their comparative narrow directivities to a plurality of stations 4-1 to 4-3. *Id.* at 5:58–62. By means of antenna beams 3-1 to 3-3, access point 1 communicates with plurality of stations 4-1 and 4-3 via the substantially same channel or adjacent channel while reducing interference between stations. *Id.* at 5:63–66.

Figure 2, below, shows access point 1. *Id.* at 6:14–15.

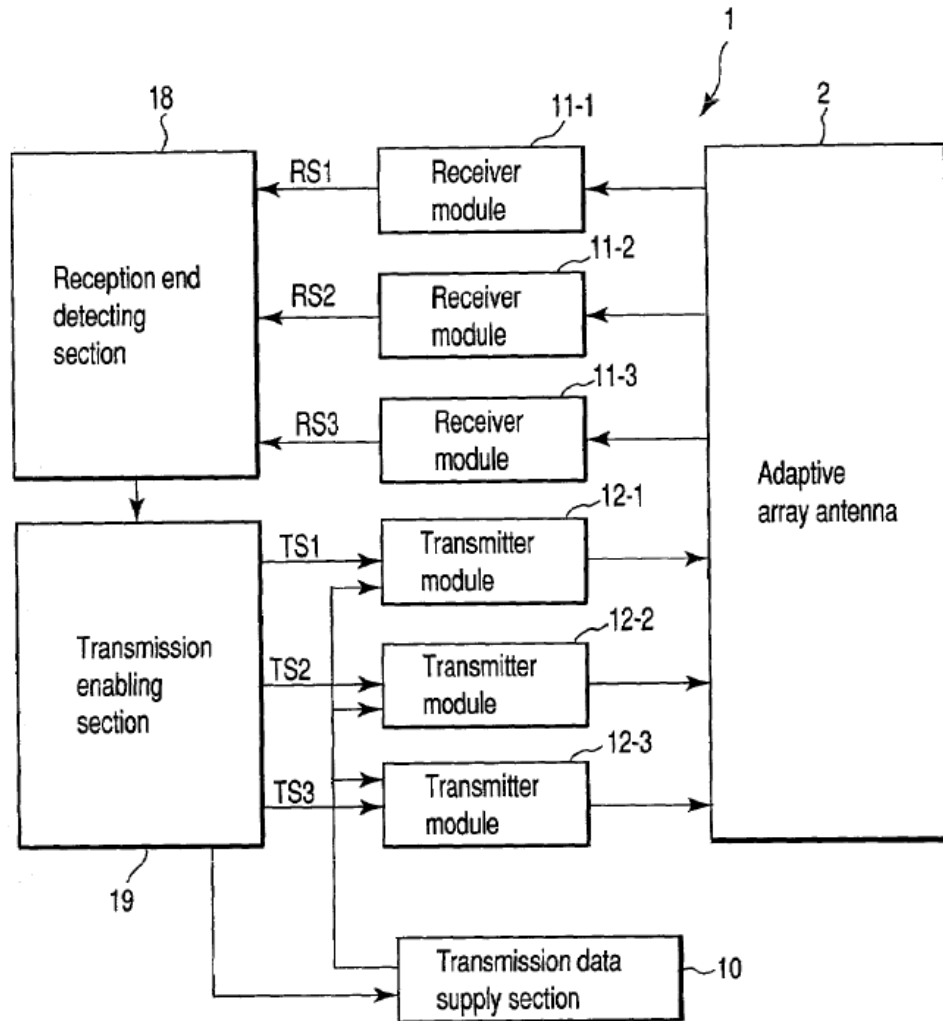


FIG. 2

Figure 2, above, shows access point 1 that comprises adaptive array antenna 2, which is connected to receiver modules 11-1 to 11-3 and transmitter modules 12-1 to 12-3. *Id.* at 6:22–23, 6:31–32.

Adaptive array antenna 2 forms antenna beams 3-1 to 3-3 oriented to stations 4-1 to 4-3 to communicate with stations 4-1 to 4-3. *Id.* at 6:19–22. Reception signals carried by antenna beams 3-1 to 3-3 are received at receiver modules 11-1 to 11-3. *Id.* at 6:23–26. At receiver modules 11-1 to

11-3, reception signals are processed, and reception signals RS1 to RS3 are generated. *Id.* at 6:26–28. At transmitter modules 12-1 to 12-3, transmission signals TS1 to TS3 to be transmitted to the stations 4-1 to 4-3 respectively are generated, and these transmission signals TS1 to TS3 are supplied to adaptive antenna 2. *Id.* at 6:32–36.

Access point 1 also comprises reception end detecting section 18 and transmission enabling section 19. *Id.* at 6:40–41. In a reception mode, reception end detecting section 18 detects a final transfer time in a reception signal in receiver modules 11-1 to 11-3, thereby generating a reception end signal. *Id.* at 6:41–47. Transmission enabling section 19 supplies a transmission enable signal to transmitter modules 12-1 to 12-3 in response to the reception end signal. *Id.* at 6:47–49. Access point 1 is switched from the reception mode to the transmission mode in response to the transmission enable signal. *Id.* at 6:49–52. Transmission enabling section 19 maintains transmitter modules 12-1 to 12-3 in a transmission disable state in the reception mode, and the receiver modules 11-1 to 11-3 in a receiving disable state in the transmission mode. *Id.* at 6:52–56. Transmission enabling section 19 switches transmitter modules 12-1 to 12-3 from the transmission disable state to the transmission enable state in response to the transmission enable signal. *Id.* at 6:56–59.

2. *Independent Claim 15*

The dispute between the parties pertains to element 15B.2, which is as follows:

the signal transmission/reception coordination logic adapted to restrain at least a third access point of the plurality of access points from transmitting a third signal on a third channel responsive to the ascertaining that the first access point is receiving the first signal and that the second access point is

receiving the second signal that is ongoing-on the second channel.

Ex. 1001, 39–45.

For element 15B.2, Petitioner argues that Kasami’s transmission enabling section 19, illustrated in Figure 8, performs the function of restraining transmissions. Pet. 40–42 (citing, e.g., Ex. 1005, 6:47–56, 10:39–59, 12:20–24, Figs. 8, 10). Petitioner relies on Kasami’s teachings of restraining all transmissions while access point 1 is in reception mode. *Id.* at 40–48 (citing, e.g., Ex. 1005, 6:47–56, 7:14–21, 7:23–33, 10:39–59, 12:20–33, Figs. 8, 10). The parties do not dispute that all transmissions are restrained. *See, e.g., id.* at 43, 47 (arguing Kasami teaches restraining “all its transmission modules” when Kasami’s apparatus is “switched to reception mode”); Prelim. Resp. 13–14 (arguing “Kasami’s apparatus simply disables all transmissions whenever it expects an ACK signal from a station”).

Petitioner acknowledges that functional limitations in addition to the broad function of restraining transmissions are recited in claim 15. Pet. 8 (identifying the “specified function for each limitation” including functions for elements 15B.1, 15B.1a, 15B.1b, and 15B.2). For element 15B.2, claim 15 recites that the signal transmission/reception coordination logic is adapted to restrain “at least a third access point . . . from transmitting . . . on a third channel responsive to the ascertaining that the first access point is receiving [on a first channel] . . . and that the second access point is receiving . . . [on] a second channel.” For these functional recitations in element 15B.2, Petitioner relies on its contentions for prior recitations in claim 15, i.e., “a wireless input/output (I/O) unit that is configured to establish a plurality of access points” (element 15A) and “signal transmission/reception coordination logic that is capable of ascertaining, by monitoring the plurality

of access points for received signals” (element 15B.1). *See, e.g.*, Pet. 46–47 (citing Section V.B.2.b (discussing element 15A) and Section V.B.3.b.i (discussing element 15B.1) of the Petition), *see also id.* at 19 (start of V.B.2.b discussing element 15A), 32 (start of Section V.B.3.b.i discussing element 15B.1).

We discuss Petitioner’s contentions for those other elements in the order the elements are recited in the claim. Starting with element 15A, Petitioner acknowledges that with respect to its first embodiment, Kasami describes one access point, i.e., access point 1. *Id.* at 10–11. Petitioner points to description in the ’939 patent that “[e]ach respective RF part 610, along with at least part of beamformer 612 and/or antenna array 208, and each respective communication beam 202 **may also correspond to the different respective access points 402**” of Figure 4. *Id.* at 19 (citing Ex. 1001, 9:13–16, Fig. 4). Petitioner argues that the aforementioned description in the ’939 patent defines “access point” relative to a directed communication beam 202. *Id.*

Petitioner relies on its arguments regarding the definition of “access point” in the ’939 patent and argues that beams 3-1 to 3-3 form part of the first, second, and third access points, respectively. *Id.* at 21. More specifically, Petitioner argues the following:

Kasami’s wireless communication apparatus (access point 1) includes a plurality of “access points” as that term is used in the ’939 patent. (CISCO-1003, ¶91.) Kasami’s adaptive array antenna 2, illustrated in annotated Figure 1, “generates a plurality of radio waves 3-1 to 3-3 (hereinafter, referred to as antenna beams) with their comparatively narrow directivities to a plurality of stations 4-1 to 4-3.” (CISCO-1005, 5:58–62.) Directed communication beam 3-1 (shaded yellow) is part of a first “access point”; directed communication beam 3-2 (shaded orange) is part of a second “access point” and directed

communication beam 3-3 (shaded blue) is part of a third “access point.” (CISCO-1003, ¶91.)

Id.

Petitioner’s annotated version of Figure 1 of Kasami is reproduced below.

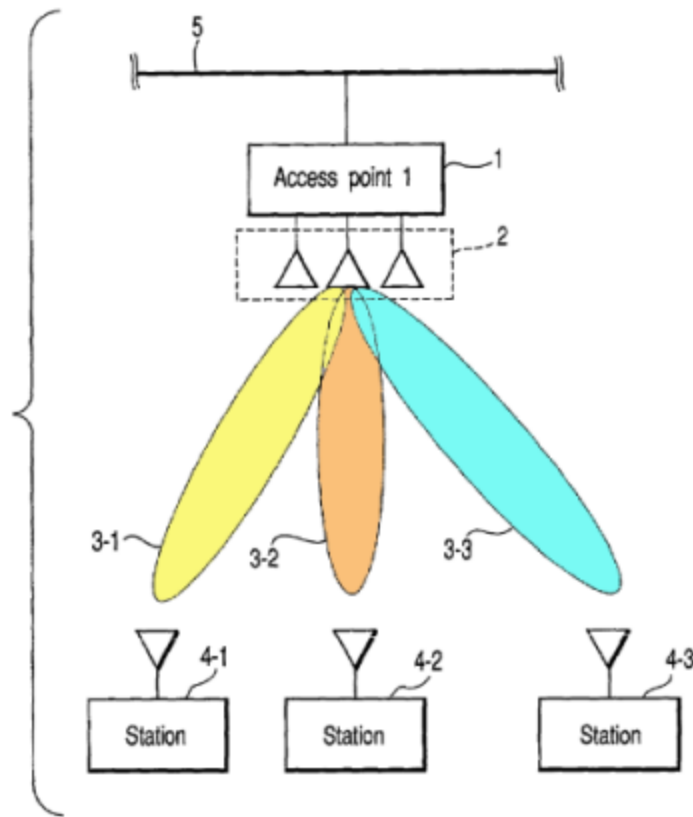


FIG. 1

Kasami, Annotated Figure 1

Figure 1, above, shows a wireless LAN system including access point 1 that comprises adaptive array antenna 2 that forms antenna beam 3-1 (highlighted in yellow), antenna beam 3-2 (highlighted in orange), and antenna beam 3-3 (highlighted in blue). Ex. 1005, 6:19–22, Fig. 1; Pet. 22.

Petitioner also relies on Dr. Jeffay’s testimony that Kasami’s transmission and reception circuitry form part of the first, second, and third

access points. *Id.* at 23–24 (citing Ex. 1003 ¶ 93). More specifically, Petitioner argues the following:

[I]n Kasami, receiver module 11-1, transmitter module 12-1, receiving beam forming circuit 35-1, and transmission beam forming circuit 36-1 correspond to a directed beam (e.g., beam 3-1) and are part of a recited “access point” (shaded yellow); receiver module 11-2, transmitter module 12-2, receiving beam forming circuit 35-2, and transmission beam forming circuit 36-2 correspond to a directed beam (e.g., beam 3-2) and are collectively part of a recited “access point” (shaded orange); and receiver module 11-3, transmitter module 12-3, receiving beam forming circuit 35-3, and transmission beam forming circuit 36-3 correspond to a directed beam (e.g., beam 3-3) and are collectively part of a recited “access point” (shaded blue). (CISCO-1003, ¶93.) The RF components and antenna element of Kasami’s antenna array (shaded green) are shared by each of its “access points.” (CISCO-1003, ¶93.)

Id. at 23–24.

For element 15B.1, Petitioner acknowledges that Kasami describes with respect to its first embodiment (illustrated in Figure 1) that access point 1 “can communicate with the plurality of stations 4-1 and 4-3 via the **substantially same channel or adjacent channel** while reducing interference between stations.” *Id.* at 35 (citing, e.g., 5:63–66). Petitioner does not rely on Kasami’s adjacent channel for disclosing the second channel. *See generally* Pet. Instead, Petitioner points to description at the end of Kasami following all embodiments. *Id.* (citing, e.g., Ex. 1005, 25:62–26:2). In particular, Kasami describes second, third, fourth, fifth, and sixth embodiments. Ex. 1005, 13:41–44, 15:12–14, 18:29–31, 19:66–67, 21:58–61. Following the description of the sixth embodiment, Kasami describes the following:

There is a case in which wireless module shares one array antenna, an antenna beam pattern is provided as multiple beams,

thereby transmitting/receiving a radio signal to each wireless module. Because of this, the channels as claimed in the claims may be channels different from each other in frequency or may be such channels as to accommodate a specific wireless station decided depending on the frequency and antenna beam pattern.

Ex. 1005, 25:62–26.2 (cited in Pet. 35). Petitioner also refers to claims 4 and 14 of Kasami. Pet. 35.

Petitioner also relies on the testimony of Dr. Jeffay and argues “[i]t was well-known prior to the ’939 patent that a network-based apparatus in a wireless network utilized channels to communicate with mobile devices (e.g., frequency and/or time channels) and that multiple different channels could be used for the downlink and/or uplink.” *Id.* (citing Ex. 1003 ¶¶ 39–44, 59–62, 109; Ex. 1011, 1:35–39). Also relying on the testimony of Dr. Jeffay, Petitioner argues “in an SDMA system, like that of Kasami, each independent spatially distinct beam may be considered a separate spatial channel.” Pet. 35–36 (citing Ex. 1003 ¶¶ 44, 109).

Relying again on the testimony of Dr. Jeffay, Petitioner argues based on Kasami’s teachings relating to different embodiments and “the general knowledge in the art” that “Kasami’s ‘*access points*’ are configured in embodiments to use different ‘*channels*’, as illustrated in annotated Figure 1 for the uplink (receive) path.” *Id.* at 36 (citing Ex. 1003 ¶ 110). Petitioner provides a second annotated version of Figure 1 of Kasami, which is reproduced below.

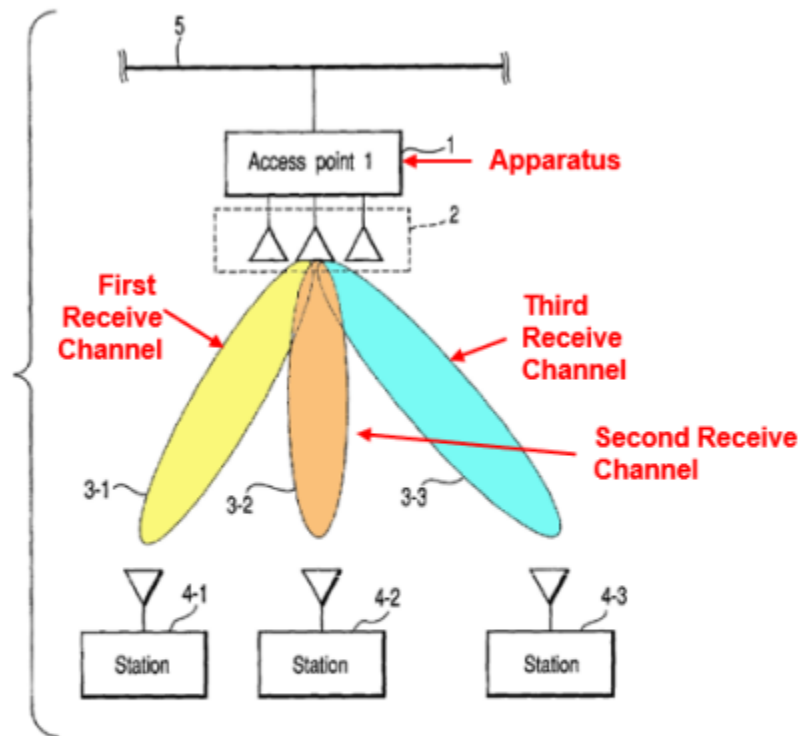


FIG. 1

Kasami, Annotated Figure 1

Figure 1, above, shows a wireless LAN system including access point 1 (annotated with red text stating “Apparatus”) that comprises adaptive array antenna 2 that forms antenna beam 3-1 (highlighted in yellow and annotated with red text stating “First Receive Channel”), antenna beam 3-2 (highlighted in orange and annotated with red text stating “Second Receive Channel”), and antenna beam 3-3 (highlighted in blue and annotated with red text stating “Third Receive Channel”). Ex. 1005, 6:19–22, Fig. 1; Pet. 22.

As discussed above, Patent Owner does not dispute that all transmissions are restrained. *See, e.g.*, Prelim. Resp. 13–14 (arguing “Kasami’s apparatus simply disables all transmissions whenever it expects an ACK signal from a station”). With respect to “restrain[ing] a third access

point from transmitting a third signal on a third channel” recited in element 15B.2, Patent Owner argues “Kasami’s transmission enabling section 19 does not enable or disable transmissions by specific access points on specific channels.” *Id.* at 11. With respect to “responsive to ascertaining that the first access point is receiving a first signal on the first channel and the second access point is receiving a second signal that is ongoing on the second channel” recited in element 15B.2, Patent Owner argues “Kasami’s alleged transmission restraints are not responsive to any channel-specific receive information.” *Id.* at 13. Patent Owner also disputes Petitioner’s mapping as follows:

the Petition already previously mapped Kasami’s communication beams to the claims “access points.” [] The Petition cannot now assert that Kasami’s communication beams also correspond to the claimed “channels.” Doing so would vitiate and render superfluous all of the claim language reciting “channels,” which is improper. Doing so defies both the claim language and the specification, which refers to access points as distinct from channels. ’939 patent, 5:30–6:54.

Prelim. Resp. 17.

As authorized, Petitioner submitted a Reply arguing that we should not discretionarily deny institution. Reply, 1. Petitioner argues that Patent Owner misquotes the claim language, which recites restraining “***at least a third access point.***” *Id.* at 2. Petitioner argues that Patent Owner “seeks to import limitations into broadly written claims.” *Id.*

Patent Owner responds “‘at least’ means that the system could restrain more than one access point from transmitting on the ‘second channel’ (cl. 30) or ‘third channel’ (cl. 15).” Sur-reply 1–2. Patent Owner argues the recitation of “at least” “does not allow Petitioner to disregard the language requiring restraint on a specific ‘second channel’ or ‘third channel.’” *Id.* at 2.

Patent Owner further argues “Petitioner also ignores that the ‘responsive to the ascertaining’ language refers back to an ‘ascertaining’ step that is also channel-specific (i.e., the ‘first channel’).” *Id.*

Upon consideration of the parties’ arguments and evidence of record, we agree with Patent Owner that Petitioner does not show sufficiently that Kasami teaches element 15B.2 and specifically, at least the first, second, and third channels. Petitioner relies on a modification of the first embodiment of Kasami. Pet. 15–51. As discussed above, Kasami’s first embodiment illustrated in Figure 1 includes a single access point, i.e., “Access point 1.” Ex. 1005, Fig. 1. Kasami describes that “access point 1 can communicate with the plurality of stations 4-1 and 4-3 via the substantially same channel or adjacent channel.” *Id.* at 5:63–66. As discussed above, Petitioner does not rely on the adjacent channel but instead, relies on description pertaining to another embodiment in Kasami and general knowledge of a person having ordinary skill in the art. Pet. 15–51. Petitioner does not provide sufficient reasoning to modify the Figure 1 embodiment of Kasami in accordance with teachings relating to Kasami’s other embodiment or the general knowledge of a person having ordinary skill in the art. *Id.* at 10–51.

Petitioner also relies on the testimony of its expert Dr. Jeffay to map Kasami’s antenna beams 3-1 to 3-3 such that according to Petitioner each of antenna beams 3-1 to 3-3 is part of a first, second, and third access point, respectively, (*id.* at 21–22) and also is a first, second, and third receive channel, respectively (*id.* at 36). Dr. Jeffay’s testimony cites as support a reference describing frequency channels, spatial channels, and use of different channels for communication with mobile systems. *See, e.g.*, Ex. 1003 (citing Ex. 1011, 1:35–39, 1:43–47, 12:33–38, 13:26–29). Neither Dr. Jeffay’s testimony nor the other reference remedies the deficiency in the

Figure 1 embodiment of Kasami and the lack of reasoning to modify Figure 1 so as to achieve the mapping set forth by Petitioner to meet the elements recited in claim 15.

Additionally, Petitioner may not rely on Dr. Jeffay's testimony alone for element 15B.2. Testimony cannot take the place of disclosure in a prior art reference, when that disclosure is required as part of the unpatentability analysis. *See Consolidated Trial Practice Guide* ("Consolidated Practice Guide") at 36; *see also* 84 Fed. Reg. 64,280 (Nov. 21, 2019). More specifically, the Consolidated Practice Guide sets forth the following:

Expert testimony, however, cannot take the place of a disclosure in a prior art reference, when that disclosure is required as part of the unpatentability analysis. For example, because "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987), a petitioner asserting anticipation cannot rely on its expert to supply disclosure of a claim element that is not expressly or inherently present in the reference. Similarly, in an obviousness analysis, conclusory assertions from a third party about general knowledge in the art cannot, without supporting evidence of record, supply a limitation that is not evidently and indisputably within the common knowledge of those skilled in the art. *K/S Himpp v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1365 (Fed. Cir. 2014). Furthermore, because an *inter partes* review may only be requested "on the basis of prior art consisting of patents or printed publications," 35 U.S.C. § 311(b), expert testimony cannot take the place of disclosure from patents or printed publications. In other words, expert testimony may explain "patents and printed publications," but is not a substitute for disclosure in a prior art reference itself.

Consolidated Practice Guide at 36.

For the reasons given, we determine that Petitioner has not shown sufficiently that Kasami teaches each recitation of independent claim 15.

Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 15 is unpatentable under 35 U.S.C. § 103(a) as obvious over Kasami.

3. Independent Claim 30

Independent claim 30 recites that the signal transmission/reception logic is adapted to “restrain at least a second access point of the plurality of access points from transmitting a second signal on a second channel different from the first channel responsive to the ascertaining that the first access point is receiving the first signal.” Ex. 1001, 22:10–14. For this recitation, Petitioner relies on its arguments and evidence for element 15B.2. Pet. 48–49. Petitioner does not supplement its arguments or evidence for claim 30 so as to resolve the deficiencies discussed with respect to claim 15. *Id.* Petitioner’s showing is not sufficient for the same reasons given for claim 15. *See supra* § III.D.2.

For the reasons given for claim 15, we determine that Petitioner has not shown sufficiently that Kasami teaches each recitation of independent claim 30. Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 30 is unpatentable under 35 U.S.C. § 103(a) as obvious over Kasami.

4. Dependent Claims 16–22 and 31–35

Claims 16–22 depend, directly or indirectly, from claim 15. Claims 31–35 depend, directly or indirectly, from claim 30. Petitioner’s arguments and evidence for dependent claims 16–22 and 31–35 do not remedy the deficiencies discussed with respect to claims 15 and 30. Pet. 51–57.

Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 16–22 and 31–35 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kasami.

E. Discretion Under 35 U.S.C. § 314(a)

Relying on the framework from *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”), Patent Owner asserts we should exercise our discretion under 35 U.S.C. § 314(a) to deny *inter partes* review based on the district court proceedings. Prelim. Resp. 22–40. We need not address Patent Owner’s contentions concerning discretionary denial under § 314(a) because Petitioner has not established a reasonable likelihood of prevailing in demonstrating the unpatentability of any challenged claim of the ’939 patent.

IV. CONCLUSION

We have reviewed the parties’ arguments and have considered all of the evidence presented by Petitioner and Patent Owner. For the foregoing reasons, we conclude that the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail in showing that any of claims 15–22 and 30–35 of the ’939 patent is unpatentable on the grounds asserted in the Petition.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied*, and no trial is instituted.

IPR2022-00958
Patent 8,289,939 B2

PETITIONER:

Lori Gordon
Ryan McBrayer
PERKINS COIE LLP
lorigordon@perkinscoie.com
RMcBrayer@perkinscoie.com

PATENT OWNER:

Reza Mirzaie
Philip Wang
RUSS, AUGUST & KABAT
rmirzaie@raklaw.com
rak_vivato@raklaw.com