

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

OZMO LICENSING LLC,
Patent Owner.

IPR2023-00193
Patent 9,264,991 B1

Before KALYAN K. DESHPANDE, *Vice Chief Administrative Patent Judge*, STACEY G. WHITE, and NATHAN A. ENGELS, *Administrative Patent Judges*.

ENGELS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Unified Patents, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1, 3, 4, 6, 7, and 14–18 of U.S. Patent No. 9, 264,991 B1 (Ex. 1001, “the ’991 patent”). Patent Owner Ozmo Licensing LLC 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 and any response thereto shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the Petition and the evidence of record, we determine Petitioner has demonstrated a reasonable likelihood of prevailing in establishing unpatentability of at least one claim of the ’991 patent. Accordingly, we institute *inter partes* review.

A. *Real Parties-in-Interest*

Petitioner identifies itself as the sole real party-in-interest. Pet. 82. Patent Owner identifies itself as the sole real party-in-interest. Paper 5, 2.

B. *Related Matters*

The parties indicate that the ’991 patent is involved in the following district court cases: *Ozmo Licensing LLC v. HP Inc.*, No. 6:21-cv-00383 (W.D. Tex.) (voluntarily dismissed); *Ozmo Licensing LLC v. Acer Inc.*, No. 6:21-cv-01225 (W.D. Tex.); *Ozmo Licensing LLC v. Dell Technologies Inc.*, No. 6:22-cv-00642 (W.D. Tex.); and *Ozmo Licensing LLC v. TCL Electronics Holdings Ltd.*, No. 6:23-cv-00249 (W.D. Tex.). Paper 8, 2; Paper 9, 1.

C. The Challenged Patent

The '991 patent “relates to seamlessly integrating short-range wireless personal area networks (‘WPANs’) into longer-range wireless local area networks (‘WLANs’).” Ex. 1001, 1:18–21. The '991 patent states that Wi-Fi based on the IEEE 802.11x standard is an example of a WLAN, and Bluetooth based on the IEEE 802.15.1 standard is an example of a WPAN. Ex. 1001, 1:40–42, 2:17–20.

WLANs generally support two modes of operation, an infrastructure mode and an ad-hoc mode. Ex. 1001, 1:61–63. In infrastructure mode, a dedicated access point (“AP”) manages connections with Wi-Fi enabled stations (“STAs”) such as computers and mobile phones via an Internet router; in ad-hoc mode, STAs can communicate with other nodes within the network, without directing the communications through an AP. Ex. 1:60–2:13, 5:3–7. WPANs allow devices to communicate to directly between each other without the need for an AP. Ex. 1001, 2:14–36.

Network-enabled devices that are battery powered are called power-sensitive stations (“PS-STAs”). Ex. 1001, 5:11–14. The '991 patent states that “a PS-STA is typically in a sleep mode the majority of the time, only waking up occasionally to communicate and exchange information with the outside world.” Ex. 1001, 5:19–22. Further, in some systems of the '991 patent, PS-STAs are equipped with a standard 802.11x-compliant wireless circuit, but PS-STAs “are not required to be fully compliant with the 802.11x specification; some PS-STAs . . . may have reduced power dissipation thereby extending the battery life.” Ex. 1001, 5:22–28.

Because WLAN and WPAN protocols co-exist in the 2.4-GHz frequency band and are not synchronized with one another, “severe

interference may result when devices conforming to such standards are made to co-exist and are positioned in the same physical vicinity.” Ex. 1001, 2:29–36. Among other things, the ’991 patent describes methods and devices that include a wireless hub to “enable seamless integration of WPAN into WLAN infrastructure.” Ex. 1001, 3:21–23.

D. Illustrative Claim

Of the challenged claims, claim 1 is the only independent claim. Claims 1, 6, and 7 are copied below with bracketed labels added to claim 1 to reflect those referenced by the parties’ briefs.

1. [1pre] A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub, comprising:
 - [1a] an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability;
 - [1b] a processor configured to:
 - [1c] process data received via the wireless radio circuit;
 - [1d] generate data to be transmitted by the wireless radio circuit;
 - [1e.1] initiate and maintain network connections with nodes of a wireless network external to the network-enabled hub,
 - [1e.2] maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, [1e.3] that can be maintained, at times, simultaneously with each other, [1f] wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol and [1g] wherein at least some of the communications using the second network protocol impinge on at least some antennae used for communications using the first network protocol; and

- [1h] implement data forwarding logic, implemented in a network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.
6. The network-enabled hub of claim 1, wherein the second network protocol is a protocol that requires lower average power consumption over time relative to the first network protocol.
7. The network-enabled hub of claim 1, wherein the first network protocol is an 802.11x wireless protocol and the second network protocol is a modification of the 802.11x wireless protocol that is not entirely compliant with the 802.11x wireless protocol of the first network but can be maintained in a common wireless space as the 802.11x wireless protocol.

E. Alleged Grounds of Unpatentability

Petitioner asserts that claims 1, 3, 4, 6, 7, and 14–18 would have been unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1, 3, 4, 6, 7, 14, 16, 17	103(a) ¹	Cromer ² , Ganu ³ ,
1, 3, 4, 6, 7, 14, 16, 17	103(a)	Cromer, Ganu, Sinivaara ⁴
15, 18	103(a)	Cromer, Ganu, Judd ⁵
15, 18	103(a)	Cromer, Ganu, Sinivaara, Judd

¹ The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. The ’991 patent was filed prior to the effective date of the AIA. Therefore, we apply the pre-AIA version of § 103; however, our analysis would be the same under the current version of the statute.

² US 7,389,352 B2; issued June 17, 2008. Ex. 1004.

³ S. Ganu et al., Architecture and Prototyping of an 802.11-Based Self-Organizing Hierarchical Ad-Hoc Wireless Network (SOHAN), IEEE 04TH8754, 2004. Ex. 1005.

⁴ WO 2006/000617; published Jan. 5, 2006. Ex. 1006.

⁵ WO 01/52447 A1; published July 19, 2001. Ex. 1019.

Pet. 1. Petitioner also supports its challenge with a Declaration of Dr. Zygmunt J. Haas. Ex. 1003.

II. ANALYSIS

A. *Level of Ordinary Skill in the Art*

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Petitioner contends a person of ordinary skill in the art at the time of the invention would have had “a Bachelor’s degree in Electrical Engineering or a similar degree and two years of professional experience working in wireless networking, including WLAN and WPAN protocols and devices; more experience would supplement less education and vice versa.” Pet. 7 (citing Ex. 1003 ¶¶ 42–45). At this time, Patent Owner does not dispute Petitioner’s proposed level of ordinary skill in the art. See Prelim. Resp.

For the purposes of this Decision, we apply Petitioner’s level of ordinary skill.

B. *Claim Construction*

We construe claims using the principles set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc), and related cases. See 37 C.F.R. § 42.100(b) (2021). Under that precedent, 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.

Neither party proposes any express claim constructions. Pet. 5; Prelim. Resp. 13. However, as explained below, to the extent that the parties’ positions turn on an interpretation of the claimed “second network protocol,” we encourage the parties to directly address the scope of the challenged claims during trial. For the purposes of this Decision, we preliminarily determine that the language of the claims themselves provides some clarity regarding claim scope. Limitation [1g], for example, provides that the second network protocol “is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol.” Also, the limitations of claims 6 and 7, which depend from claim 1, provide that the second network protocol “is a protocol that requires lower average power consumption over time relative to the first network protocol” (claim 6) and “is a modification of the 802.11x wireless protocol that is not entirely compliant with the 802.11x wireless protocol of the first network but can be maintained in a common wireless space as the 802.11x wireless protocol” (claim 7).

Also, as cited by Petitioner (Pet. 49–50 (citing Ex. 1001, 7:13–17, 9:60–66)), the ’991 patent’s specification provides some additional guidance. First, the specification states that “[i]f the communication protocol between the wireless hub and a PS-STA is modified to reduce power consumption of the PS-STA, the 802.11x device driver may also require slight modification to accommodate such changes.” Ex. 1001, 7:13–17. The specification also states:

Coordination [of the usage of wireless devices on a WLAN that may be active in the same space] is achieved by the use of a secondary network (WPAN) protocol that is an overlay protocol that is partially compatible with the WLAN protocol, but not entirely, in terms of power, frame contents and sequences, timing, etc. The secondary network (WPAN) protocols might be 802.11x frames with new frame arrangements adapted for WPAN needs, such as reduced latency, power, etc.

Ex. 1001, 9:60–66.

Beyond that, we determine it is unnecessary to expressly construe any terms at this stage. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Ground 1

The Petition presents a limitation-by-limitation comparison of each of claims 1, 3, 4, 6, 7, 14, 16, and 17 to the combined teachings of Cromer and Ganu, with reasons for combining the references and with supporting citations to the declaration testimony of Dr. Haas. Pet. 21–68. With arguments directed to claim 1, Patent Owner disputes Petitioner’s showings. Prelim. Resp. 13–21.

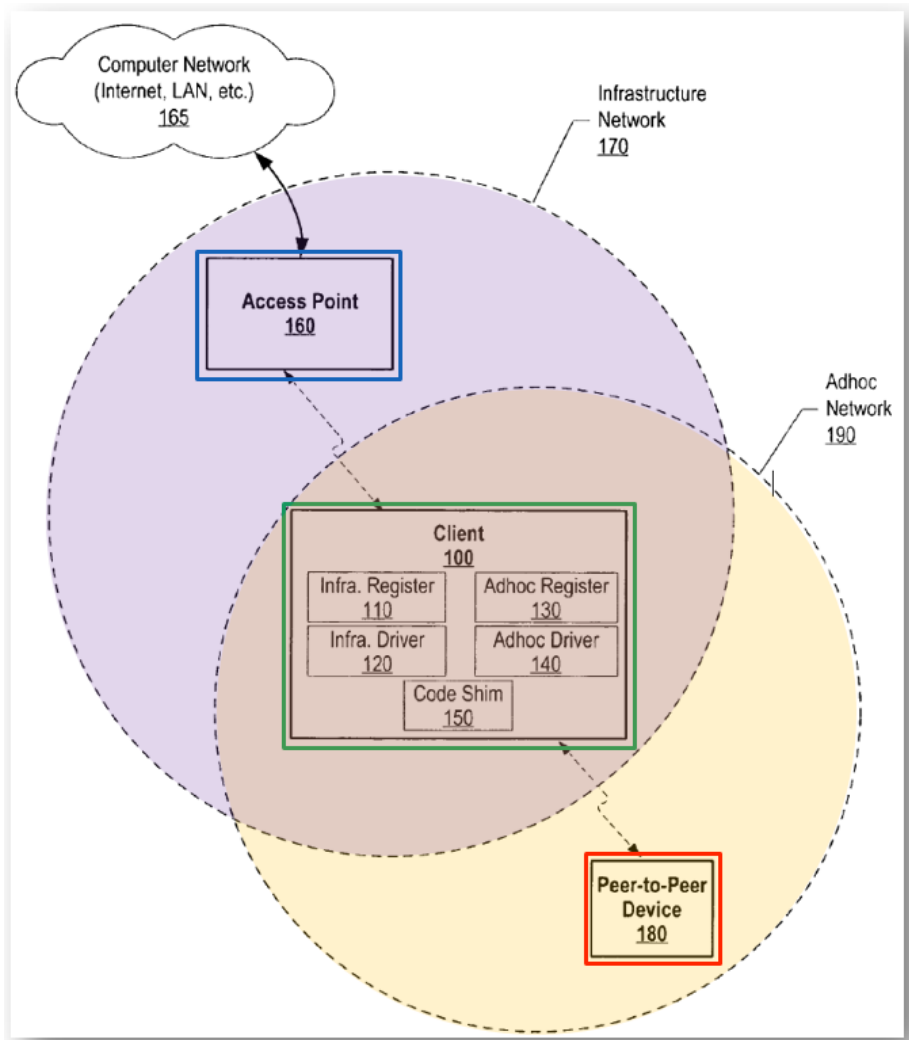
1. Claim 1

[1pre] *A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub, comprising:*

[1a] *an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability;*

- [1b] a processor configured to:*
- [1c] process data received via the wireless radio circuit;*
- [1d] generate data to be transmitted by the wireless radio circuit;*

With reference to Cromer's Figure 1, Petitioner contends Cromer describes a client device 100 that, as modified by Ganu, serves as a forwarding node ("FN") (the claimed "network-enabled hub") between an access point 160 ("AP") and a peer-to-peer device 180. Pet. 21–23; *see* Pet. 21–41. Petitioner's annotated version of Cromer's Figure 1 is reproduced below.



Cromer's Figure 1 (Annotated)

Pet. 22. Petitioner's annotated version of Cromer's Figure 1 depicts a client 100 in communication with AP 160 in an Infrastructure Network 170 (shaded purple) and in communication with Peer-to-Peer Device 180 in an Adhoc Network 190 (shaded tan). Petitioner states that Cromer teaches that a client device such as a personal computer can concurrently operate in WLAN and WPAN environments, communicating with the Internet via an AP in infrastructure mode and communicating with a peer-to-peer device (e.g., a printer) in ad hoc mode. Pet. 23 (citing Ex. 1004, 1:39–44, 2:1–29, 3:39–51, 5:2–6, 7:30–45, Figs. 1, 7). Petitioner also states that Ganu teaches using ad hoc FNs as intermediate radio relays between mobile nodes ("MN") and APs such that the MNs can access the Internet via the FNs and APs. Pet. 24–25 (citing Ex. 1005, 880–881⁶, Fig. 1; Ex. 1003 ¶ 84). Thus, according to Petitioner, a client device configured as an FN as taught by Ganu would have been a network-enabled hub "because it provides communication between *Cromer's* WLAN and WPAN, providing relay/repeater functionality between the two networks." Pet. 25 (citing Ex. 1003 ¶ 84). Further, Petitioner contends:

a [person of ordinary skill in the art] would have been motivated to incorporate Ganu's teachings of FNs using data forwarding techniques to relay [I]nternet traffic between MNs and APs into Cromer's system such that client device 100 relays data between peer-to-peer WPAN devices 180 and AP 160, allowing peer-to-peer WPAN devices 180 to communication with AP 160 via client device 100 and access the Internet.

⁶ For clarify, we cite the document's original pagination.

Pet. 26. Petitioner also cites Cromer as disclosing the claimed interface that provides bi-directional wireless communications and the claimed processor configured to process received data and generate data for transmission.

Pet. 29–41.

Patent Owner addresses these limitations in combination with Patent Owner’s arguments related to claim element [1e]. We address those arguments and the current evidence of record below. On the current record and as further discussed below, we determine Petitioner has sufficiently shown that the combined teachings of Cromer and Ganu satisfy claim elements [1.pre]⁷–[1.d] for the purposes of institution.

[1e.1] initiate and maintain network connections with nodes of a wireless network external to the network-enabled hub,
[1e.2] maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, [1e.3] that can be maintained, at times, simultaneously with each other,

Petitioner contends Cromer and Ganu disclose a processor initiating and maintaining WLAN (the claimed “first network connection”) and WPAN connections (the claimed “second network connection”), such that Cromer as modified by Ganu “would use *Ganu*’s 802.11-like ‘association’ messaging for its WPAN connections to configure the client devices as a *Ganu* forwarding node (FN).” Pet. 45; see Pet. 42–47. According to Petitioner, the proposed combination would have included a WLAN connection using 802.11 “infrastructure” protocol (the claimed “first

⁷ At this stage, because we determine Petitioner has sufficiently shown that the prior art satisfies the preamble for purposes of institution, we do not determine whether the preamble is limiting.

network protocol”) and a WPAN connection using Ganu’s modified-802.11 ad-hoc protocol (the claimed “second network protocol”). Pet. 47–48.

More specifically, Petitioner states that Ganu taught modifying the 802.11 ad-hoc protocol by (1) having FNs append transmit power to each outgoing beacon and MNs append the received signal strength for each incoming beacon and (2) adding 802.11-like association to organize MNs into cells with power-efficient selection of FNs. Pet. 48–49. According to Petitioner, “*Cromer*’s client device 100 would transmit beacons (synchronization messages) with modified power fields and *Cromer*’s peer-to-peer devices 180 would scan channels, listening to the modified beacons, and select and send an ‘association message to the best “cost” parent’ (*i.e.*, client device 100) to ‘lower power consumption at’ peer-to-peer devices 180.” Pet. 49 (citing Ex. 1005 1, 3; Ex. 1003 ¶ 131). Petitioner contends 802.11 and modified 802.11 are preferred embodiments of the claimed first and second network protocols, as disclosed in the ’991 patent. Pet. 49–50 (citing Ex. 1001, 7:13–17, 9:60–66, code (57), claims 1, 7; Ex. 1003 ¶ 132).

Patent Owner contends Petitioner fails to satisfy claim element [1e.2] “because Ganu’s communication routine is clearly *not* implemented using a different network protocol from the ad hoc mode protocol specified in the 802.11 standard.” Prelim. Resp. 15. Patent Owner argues Ganu does not teach any modification to the 802.11 ad-hoc mode protocol because Ganu teaches that its “beacons” are generated by the application layer (Layer 3), not at Layer 2, which could constitute modifications of the 802.11 network protocol itself. Prelim. Resp. 16–21. Patent Owner contends that Ganu states that its beacons are prototype application-level packets and that actual 802.11 beacons are generated by firmware and are not customizable.

Prelim. Resp. 17 (citing Ex. 1005, 882). Thus, according to Patent Owner, “regardless of whatever changes Ganu may teach as to application level routines, Petitioner fails to cite any teachings in Ganu as to modifications of the 802.11 protocol itself, which is essential to Petitioner’s own argument for satisfaction of [claim element 1e.2].” Prelim. Resp. 21. Further, Patent Owner argues “[a]dding an application that provides commands to the Wi-Fi network protocol stack without modifying it in any way does not amount to any inconsistency between the second protocol and the first protocol.” Prelim. Resp. 21.

As noted above, to the extent that the parties’ positions turn on an interpretation of the claimed “second network protocol,” we encourage the parties to directly address the scope of the challenged claims during trial. Although Patent Owner’s arguments turn on an implicit interpretation of the second network protocol, Patent Owner’s Preliminary Response does not address relevant portions of the intrinsic record. For example, Patent Owner cites nothing in the intrinsic record to support its arguments that purport to distinguish Ganu based on layers of the OSI model. *E.g.*, Prelim. Resp. 20–21 (“No modifications to Layer 2 (*i.e.*, modifications to the 802.11 network protocol itself) occur in the Ganu system . . .”). In fact, on the current, preliminary record, Patent Owner’s arguments at this stage largely amount to unsupported attorney argument.

Patent Owner also argues that the Cromer-Ganu device cited by Petitioner for claim element [1e.2] cannot satisfy the limitations of the preamble [1.pre]. Prelim. Resp. 22–26. Patent Owner contends “Ganu teaches a network structure in which all network connections operate in, specifically, 802.11 ad-hoc mode.” Prelim. Resp. 23 (citing Ex. 1004, 880).

Further, Petitioner asserts, without support, that “[f]or a Cromer client device 100 to be configured as a Ganu FN to enable Ganu-like data relay functions, as set forth by Petitioner in limitation [1.pre], all of the connections to/from that Ganu FN need to be operating an *ad hoc* mode 802.11 protocol.” Prelim. Resp. 24. Although Patent Owner contends it is “simply impossible” for a single connection to “simultaneously be an 802.11 *ad hoc* mode connection routing traffic point-to-point to any other node in the network, and an 802.11 infrastructure mode connection routing all traffic via a single associated AP” (Prelim. Resp. 24–25) (underlining in original), these contentions amount to attorney arguments unsupported by evidence on the current record. Patent Owner also suggests that the Ganu FN “is a 2004-era wireless network router” that operates in *ad-hoc* mode and that to operate a Ganu-like FN in infrastructure mode would “vitate the very purpose of the Ganu system configuration” (Prelim. Resp. 25–26), but these arguments focus on the actual proof-of-concept prototype described in Ganu, as opposed to what a person of ordinary skill would have understood from Ganu’s teachings, and are again not supported by evidence on the current record.

In contrast, Petitioner’s citations to Cromer, Ganu, and testimony from Dr. Haas present reasonable evidence to support its argument that the combined teachings of Cromer and Ganu satisfy the limitations of [1.e] and [1.pre]. Among other things, Dr. Haas states that a person of ordinary skill would have understood that Ganu’s modifications to the 802.11 *ad-hoc* protocol made it a second network protocol (Ex. 1003 ¶ 132), and Patent Owner’s attorney argument is insufficient to rebut that showing on the current record. Petitioner is also consistent in its arguments for limitation

[1.e] and claims 6 and 7; regarding claim 6, Petitioner cites Ganu's teachings of reducing delay and lower power consumption at end-user devices to argue that the 802.11-modified protocol of Cromer-Ganu requires a lower average power consumption over time relative to the 802.11 WLAN protocol. Pet. 65 (citing Ex. 1005, 880; Ex. 1003 ¶ 161). And regarding claim 7, Petitioner contends the 802.11-modified protocol taught by Ganu is not entirely compliant with the 802.11x wireless protocol. Pet. 66 (citing Ex. 1003 ¶ 163). These positions are consistent with Petitioner's arguments for claim element [1.e] relying on Ganu's teachings regarding modifying the 802.11 ad-hoc protocol, including applying Ganu's teachings of new power fields "Tx Power" and "Rx Power" appended to the 802.11 MAC beacon frames. Pet. 20–21 (citing Ex. 1005, 882 (describing "augmented 802.11 MAC beacons")), Fig. 4). Accordingly, based on the current, preliminary record, we determine for the purposes of institution that Petitioner has shown sufficiently that claim element [1.e] is satisfied by the combined teachings of Cromer and Ganu.

[1f] wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol and [1g] wherein at least some of the communications using the second network protocol impinge on at least some antennae used for communications using the first network protocol; and

[1h] implement data forwarding logic, implemented in a network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.

Petitioner also contends that the Cromer-Ganu modified 802.11 ad-hoc WPAN protocol is an overlay protocol because it is partially consistent with the 802.11 protocol in that it “share[s] the un-modified aspects of the 802.11 standard used by the 802.11 infrastructure, WLAN protocol.” Pet. 53 (citing Ex. 1003 ¶¶ 139–144; Ex. 1010, 27–31 (citing the district court as construing “partially consistent” to mean “conforms to a part, but not the entirety of”)); see Pet. 53–56. Petitioner further contends that at least some of the communications using the Cromer-Ganu modified 802.11 ad-hoc WPAN protocol “would reach (*i.e., impinge*) on the antennae of AP 160, client 100, and/or other WLAN 802.11 devices associated with AP 160, all of which communicate using the infrastructure 802.11 protocol,” “whenever AP 160 and other WLAN 802.11 devices associated with AP 160 were within range of client device 100’s communications” using the *Cromer-Ganu* modified-802.11 ad-hoc, WPAN protocol. Pet. 56–57 (citing Ex. 1004, Fig. 1; Ex. 1003 ¶ 146). According to Petitioner, “impingement would [also] occur whenever AP 160, client device 100, and other WLAN 802.11 devices associated with AP 160 are within range of peer-to-peer, WPAN device 180’s communications.” Pet. 56–57 (citing Ex. 1004, Figs. 1 (overlapping network ranges), 7 (client device having single antenna for both protocols); Ex. 1003 ¶ 146).

Further, regarding limitation [1.h], Petitioner contends “*Cromer* as modified by *Ganu*, taught a client device 100 (*network-enabled hub*) that would organize as a forwarding node (FN) following *Ganu*’s FN teachings” such that “the data handling structures of *Cromer*’s client device 100 would have logic for carrying out *Ganu*’s data relaying, which includes data forwarding (*implement data forwarding logic*).” Pet. 58 (citing Ex. 1003

¶ 148). Petitioner contends the modified network-enabled hub would thus “use hardware and/or software to provide indirect communication (*that forwards data*) between an AP 160 (*an originating node*) and a peer-to-peer device 180 (*a destination node*)” and “Cromer’s AP 160 in a first network WLAN 170 would send data (*originating node is a node in one of the first and second networks*) and peer-to-peer device 180 in second network, WPAN 190, would receive the data (*and the destination node is a node in the other of the first and second networks*)” or the reverse. Pet. 59 (citing Ex. 1003 ¶ 150).

Patent Owner contends the Petition’s data forwarding is not achievable because “there could be no data exchange with APs and other FNs over an ad-hoc Wi-Fi protocol as required by Ganu, since there would be an infrastructure Wi-Fi protocol . . . implemented upstream to higher or equal routing tier devices (other FNs and APs) by the FN.” Prelim. Resp. 28. Thus, according to Patent Owner, “a WLAN infrastructure-mode connection between the client device 100 and the access point 160 of Cromer, as set forth by Petitioner for Item [1e.2], could not exist while simultaneously implementing the data forwarding logic of Ganu on which Petitioner relies for satisfaction of Item [1h].” Prelim. Resp. 29. Further, Patent Owner argues that Petitioner’s proposed combination is entirely inconsistent and incompatible because “there would be no way for [the WLAN] connection to dynamically alter the nodes with [which] client device 100 is directly communicating (*i.e.*, the only AP or FN with which that client device 100 can communicate would be the single AP with which the client device 100 is associated under the 802.11 infrastructure mode protocol).” Prelim. Resp. 29–30.

On the current record, Patent Owner's arguments lack evidentiary support and are insufficient to rebut the evidence cited by Petitioner, including the testimony of Dr. Haas. *See* Ex. 1003 ¶ 150. The parties are encouraged to develop these issues during trial, but at this stage and for the purposes of institution, we determine Petitioner has adequately shown that the combination of Cromer and Ganu teaches or suggests these limitations.

2. Conclusion Regarding Claim 1

After consideration of the arguments and evidence of record at this stage, we determine Petitioner has sufficiently shown, for purposes of institution, that the combination of Cromer and Ganu teaches or reasonably suggests each limitation of claim 1 and that a person of ordinary skill would have been motivated to combine the references as claimed. Thus, we determine Petitioner demonstrates a reasonable likelihood that claim 1 is unpatentable as obvious in view of Cromer and Ganu.

3. Dependent Claims 3, 4, 6, 7, 14, 16, and 17

Petitioner additionally compares each limitation of claims 3, 4, 6, 7, 14, 16, and 17 to the teachings of Cromer and Ganu. Pet. 61–68. At this stage, Patent Owner does not separately address or rebut Petitioner's showings for these claims. *See* Prelim. Resp. 30. Having reviewed Petitioner's showings, we find Petitioner's showings sufficient on the current record for the purposes of institution.

D. Grounds 2–4

As its Ground 2, Petitioner builds upon the combination of Cromer and Ganu by adding the teachings of Sinivaara regarding feigning a power-save state in a WLAN to allow the retention of the association in the infrastructure network when a mobile terminal becomes active in an ad-hoc

network. *See* Pet. 71–72. For Grounds 3 and 4, Petitioner additionally adds to the combinations of Cromer and Ganu or Cromer, Ganu, and Sinivaara the teachings of Judd relating to power supplies that receive power from a wall plug. *See* Pet. 78–80.

Patent Owner does not separately address or rebut the cited teachings of Sinivaara or Judd. Having reviewed Petitioner’s showings for these Grounds, we find Petitioner’s showings sufficient on the current record for the purposes of institution.

III. CONCLUSION

For the reasons set forth above, we determine that Petitioner has demonstrated a reasonable likelihood that it will prevail with respect to claims 1, 3, 4, 6, 7, and 14–18 of the ’991 patent. Accordingly, we 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), *inter partes* review is instituted as to claims 1, 3, 4, 6, 7, and 14–18 of the ’991 patent on each of the grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the ’991 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

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Patent 9,264,991 B1

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