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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS,

PETITIONER,

V.

GENERAL ACCESS SOLUTIONS, LTD.,

PATENT OWNER.

Case No. IPR2023-01147

U.S. Patent No. 9,426,794

PATENT OWNER'S RESPONSE

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I. INTRODUCTION

U.S. Patent No. 9,426,794 (“the ’794 patent”) claims, among other things, that the wireless communication device include: (1) a first transceiver using wide area network (“WAN”) communication protocols to communicate with the base station, (2) a second transceiver using local area network (“LAN”) communication protocols to communicate with mobile stations, and (3) that the second transceiver monitor signal characteristics and use that information to route communications to the mobile stations. Palmer is missing all three elements. Hohnstein fares no better—accordingly, the Petition fails as to each of claims 1–6 of the ’794 patent (the “Challenged Claims”).

Petitioner overreaches and takes different prior art systems disclosed in Palmer and Hohnstein to somehow fit into the Challenged Claims, analogous to a game of Tinkertoys without any attention to whether various labels appropriately apply or how whole systems fit together. As a result, Petitioner stretches Palmer as disclosing a “wide area wireless communication protocol,” when it does not, and Hohnstein as disclosing the requisite transceivers in a wireless communication device when it does not. With regard to the monitors signal characteristics and routes information limitation, Petitioner casually claims that Palmer and Hohnstein disclose this limitation, while in the co-pending district court litigation Petitioner has made clear that no WLAN transceiver has ever routed information—ever—and

that the industry standards forbid it. Petitioner cannot square its district court litigation position with its argument here.

In sum, the Board should confirm that each of the Challenged Claims are patentable because both Palmer and Hohnstein, the two primary references, fail to disclose key limitations of the claims. Although Petitioner applies superficial labels to say that the references disclose each element of the Challenged Claims, a closer examination of the references and the faulty rationales employed by Petitioner and its expert shows that is not the case.

II. BACKGROUND

A. WANs, LANs, and Base Stations

Computers, mobile phones, televisions, and other technology often work as part of a network. (EX2007, ¶35.) The specific network is a matter of design. (*Id.*) Wide Area Networks or WANs connect such things as mobile phones, fixed wireless devices, and hotspot access points such as MiFi electronic devices in large geographical areas such as a campus or city. (*Id.*) Local Area Networks or LANs connect computers, tablets, televisions, household devices such as appliances, thermostats, alarm systems, and other devices in much smaller areas, such as a single building or single portion of a building. (*Id.*)

Different types of wired and wireless networks qualify as a WAN. Examples of wireless WANs (“WWANs”) in existence at the time of the ’794 patent include

RAM Mobile Data (using a Mobitex network), CDPD (Cellular Digital Packet Data), ARDIS (Advanced Radio Data Information Services) and satellite communication. (EX1006, 45:44–45.) As Petitioner’s prior art explains, at the time the ’794 patent was filed, WANs typically “only provide[d] point-to-point communications, us[d] a narrow bandwidth, and often exhibit[ed] heavy communication traffic. Moreover[,] WANs require[d] relatively higher transmission power—a negative factor in the ever increasing need for power savings associated with portable transceiving devices. As a result, WANs [we]re generally slow and expensive. and simply d[id] not provide an effective overall solution.” (*Id.*,3:12–20.) It was against this existing WAN backdrop that cellular wireless networks—typically designed for voice calls—were evolving to provide more cost-effective, wide-area data services. (EX2007, ¶36.)

Additional types of wired and wireless networks qualify as a LAN. (EX2007, ¶37.) Examples of wired LANs at the time of the ’794 patent include IEEE 802.3 Ethernet and IEEE 802.5 Token Ring. (EX1006, 25:64–65.) Examples of wireless LANs at the time of the ’794 patent—as referenced by their related standards—include the European Telecommunications Standards Institute (ETSI) HiperLAN/1 and HiperLAN/2 systems, and the Institute of Electrical and Electronics Engineers (IEEE) 802.11, 802.11a and 802.11b standards. (EX2007, ¶37.)

In cellular wireless networks, base stations or “cell towers” serve as the main communication hub for mobile wireless devices on the network. (EX2007, ¶38.)

Base stations generally have a number of antennas with transceivers capable of sending and receiving radio frequency (“RF”) signals to and from wireless devices.

Cellular base stations connect with mobile devices in a “hub and spoke” architecture. (*Id.*)

Communications between wireless devices such as cellphones, even if they are in proximity to one another, are all routed through the base station serving those devices to a core network that makes the voice or data connection between those devices. (EX2007, ¶39.) LAN communications between two devices on the same LAN, by contrast, typically remain within the LAN, with the LAN access point making the connection between those devices. (*Id.*)

Cellular wireless networks that offer broadband data communication, such as 4G or 5G cellular networks, are ubiquitous today. (EX2007, ¶40.) But, at the time of the '794 patent, this technology was in its infancy, and wireless cellular networks were generally limited to voice communications, rudimentary text messaging, and limited data transmissions. (See EX2012 (“What is 5G? Everything You Need to Know About 5G,” Qualcomm.com, <https://www.qualcomm.com/5g/what-is-5g> (retrieved May 1, 2024).) The '794 patent introduced a novel way to leverage the nascent cellular broadband technology with LAN technology to provide “hotspot” functionality to multiple mobile devices. (EX2007, ¶40.)

B. The '794 Patent

The '794 patent, to Paul F. Struhsaker, is entitled “Wireless Communication System and Device for Coupling a Base Station and Mobile Stations.” It is directed to a wireless device equipped with both WAN and LAN transceivers that route communications from a cellular base station to wireless LAN transceivers that provide “hotspotting” functionality for other mobile devices in the LAN. (See EX1001, 4:33–36) (“A wireless broadband communication system **has been proposed**, for instance, by which to permit the effectuation of any of various communication services by way of radio links...”).¹ Wireless local area networks

¹ All emphases added unless otherwise indicated.

(“WLANs”), known at the time of the ’794 patent, differ from WANs in that “[g]enerally, the communication ranges of the mobile stations operable in such systems [wa]s relatively small.” (EX1001, 4:64–65; EX2007, ¶41.)

The wireless system and device of the ’794 patent contains two different transceivers. (EX2007, ¶42.) The first transceiver receives communications using WAN communication protocols from a base station (*e.g.*, a 4G or 5G base station) and sends that information to a second transceiver within the device. (*Id.*) The second transceiver then routes the information to other mobile stations using a LAN communication protocol (*e.g.*, Wi-Fi protocols). (*Id.*) Both transceivers operate wirelessly. (*Id.*) Thus, unlike Wi-Fi devices operating in conventional wired networks, the first transceiver receives transmissions from a *wireless* cellular base station, and the second transceiver transmits *wirelessly* to mobile devices in the LAN. (*Id.*) In doing so, the second transceiver also monitors signal characteristics and routes information to different mobile devices that take advantage of the “hotspot.” (*Id.*)

The ’794 patent discusses how this device could enable the creation of a novel broadband cellular system. “When WLAN service is provided to a plurality of fixed-site subscriber stations, cellular coverage areas are formed.” (EX1001, 3:49–51.) Setting up numerous LAN access points, each of which is able to communicate with broadband cellular base stations, “provides a radio

infrastructure throughout a geographical area throughout which wireless broadband communication services are effectuable.” (EX1001, 5:14–16) At a time when cellular broadband was still in early development and lacked the ability to provide broadband service to mobile subscribers, the ’794 patent created a novel system for providing this service utilizing a network of LAN transceivers connected to cellular WAN base stations. (EX2007, ¶43.)

Claim 1 of the ’794 patent recites the following wireless communication device:

A wireless communication device comprising:

- a first wireless transceiver operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol, and
 - a second wireless transceiver coupled to the first wireless transceiver and operable to directly communicate with a first mobile station and a second mobile station, wherein the second wireless transceiver communicates with the first mobile station and the second mobile station according to a local area wireless communication protocol,
- wherein the first wireless transceiver receives from the base station a first downlink signal intended for the first mobile station and provides the first downlink signal to the second wireless transceiver and wherein the second wireless

transceiver receives the first downlink signal and re-transmits the first downlink signal to the first mobile station as a second downlink signal according to the local area wireless communication protocol, and

wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, routes information to the first mobile station and the second mobile station, respectively.

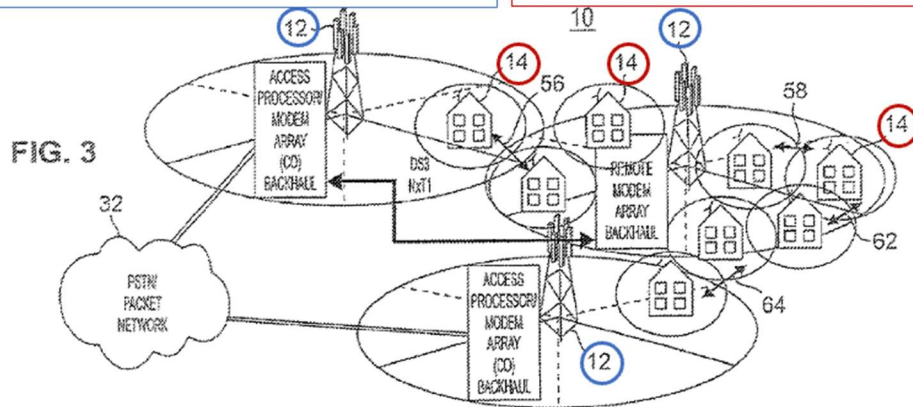
(EX1001, 10:17–44.)

The '794 patent thus claims a “two-layered” wireless communications system, in which the first layer consists of the wide area network established between the base station and the first transceiver and a plurality of wireless communication devices, and the second layer consists of the local area network established between the second transceiver and each of the same plurality of wireless communication devices and a plurality of mobile stations. (EX2007, ¶45.) Different “protocols” govern the communications in each layer of the combined network. A “protocol” is a term of art in the network architecture domain, generally meaning an established set of rules for transmissions to and from devices. (*Id.*)

Figure 3 of the '794 patent (below) illustrates the then-novel network infrastructure:

Fig. 3 “illustrates the communication system 10, here showing a plurality of base stations 12...” Ex. 1001 at 9:20-21.

Fig. 3 “illustrates . . . subscriber stations 14 associated with various ones of the base stations.” Ex. 1001 at 9:20-22.



(EX1001, Figure 3 (annotated).) A “plurality of base stations **12**” (circled in blue) provide “broadband communication services” to subscriber stations (circled in red). (EX1001, 7:31–35 9:20–22) “Each of the subscriber stations includes a WLAN transceiver.” (EX1001, 9:23) “The WLAN transceiver defines a coverage area **42** defining a cell,” and provides communications to mobile stations in that cell. (EX1001, 8:2–5) As explained in the Abstract, the base station communicates “according to a wide area wireless communication protocol,” while the WLAN communicates “according to the local area wireless communication protocol.” (EX1001, Abstract). Thus, the '794 patent defines a specific architecture that includes a WAN and LAN and the accompanying protocols that govern those networks, and it also includes specific functions that the transceivers do in relaying

downlink signals to the mobile stations, and then monitoring signal characteristics to route information. (EX2007, ¶¶46–47.)

Another important aspect of the '794 patent is that the second transceiver in the wireless device monitors pertinent “signal characteristics” and based on those signal characteristics routes information to the LAN devices. (EX2007, ¶48.) A specific limitation of claim 1 makes this clear:

wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, routes information to the first mobile station and the second mobile station, respectively.

(EX1001, 10:38–44) Thus, the transceivers recited in the Challenged Claims of the '794 patent thus do not merely transmit and receive signals, but also perform monitoring and routing functions. (EX2007, ¶48.)

This recited Wireless Local Area Network transceiver—referred to as the “second transceiver” in the Challenged Claims—can also orchestrate the distribution of information among mobile stations within the local area network. (EX2007, ¶49.) The fact that LANs enable communications between devices in the same local area is common today, as is evident in devices such as modern-day SONOS systems or wireless televisions that use YouTube TV. (*Id.*) These devices

can and do directly communicate with other LAN-enabled devices, such as iPads or computers, within the LAN in your home. Many such devices lack the capability of communicating directly with a WAN (*e.g.*, an iPad that only has Wi-Fi capability and no cellular capability). (*Id.*) Information can be routed to these devices from a WAN only via the LAN transceiver. In an industrial setting, these capabilities might be even more important because they enable secure, local communications that a company may not want shared with the cloud, and minimize use of the WAN. (EX2007, ¶50.) Because the wireless devices of the '794 patent enable two different types of communications, they need to have routing and scheduling capabilities. (*Id.*)

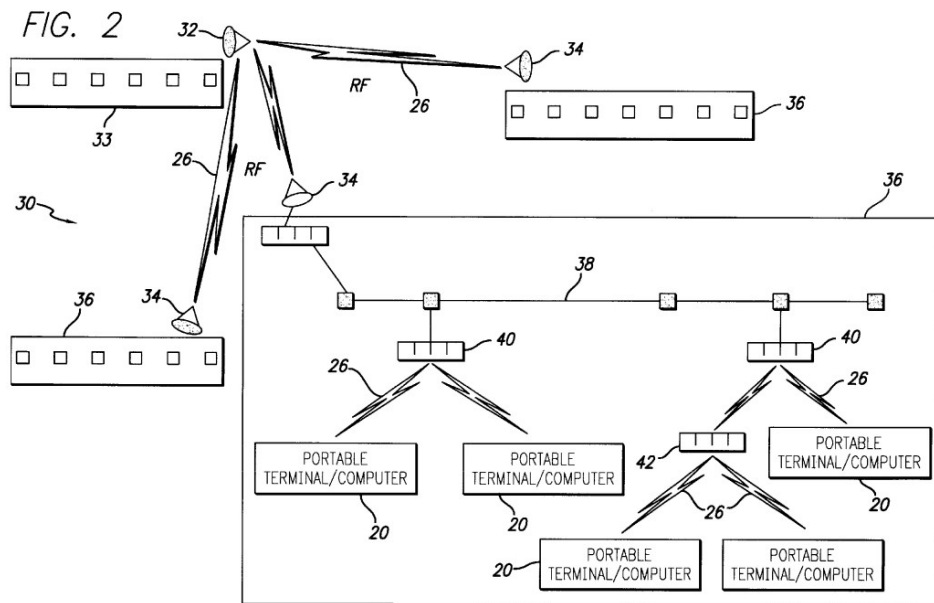
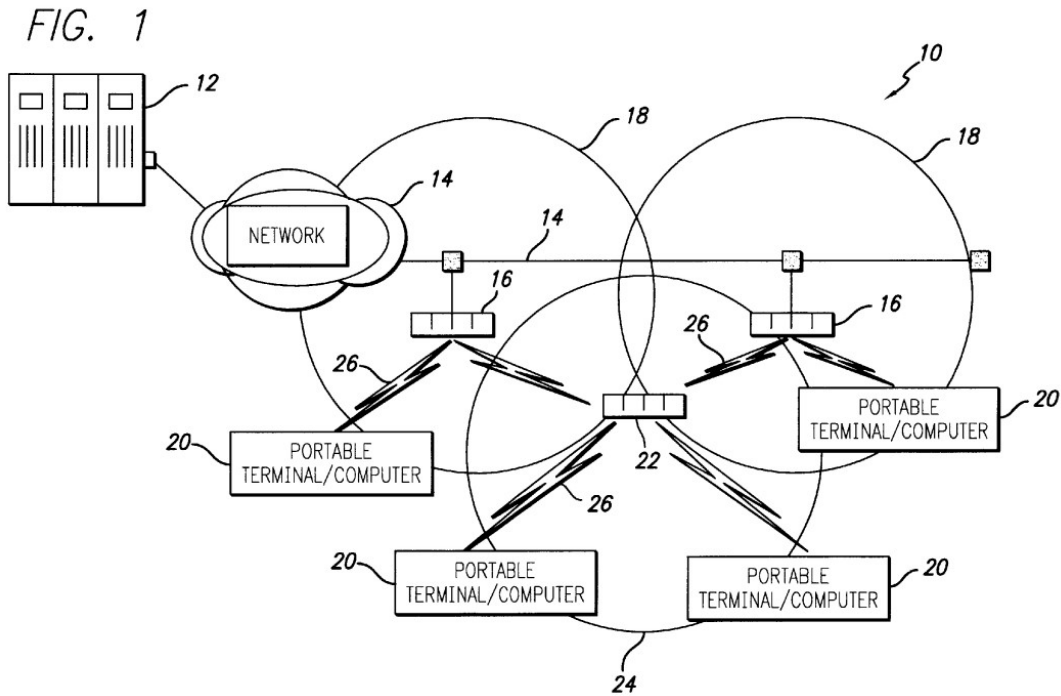
Finally, the '794 patent describes that the “base station” has a transceiver within a cellular network that communicates with an external network, transmits forward channel broadband signals from the external network to a plurality of wireless devices and receives reverse channel broadband signals from the plurality of wireless devices to transmit back to the external network. The patent describes transceiver base station **12** being set up and coupled to “a communication network **32** such as a public-switched telephonic network” or the Internet. (EX1001, 7:50–56.) The base station includes a radio link “upon which forward link channels **18** and reverse link channels **22**” permit broadband communications. (EX1001, 7:31–34.) Further, claim 1 of the '794 patent expressly claims that the base station

“communicates with the first wireless transceiver and a plurality of other wireless communication devices.” (EX1001, 10:19–22.) In other words, the claimed base station does not comprise multiple individual transceivers, each communicating point-to-point with a single one of the plurality of wireless communication devices (including the one with the first wireless transceiver). (EX2007, ¶51.) Instead, the base station recited in the Challenged Claims of the ’794 patent, which includes at least one remote modem (*see* EX1001, 7:44–49, *passim*), uses a transceiver to communicate with more than one of the communication devices. (EX2007, ¶51.) A POSA would understand this based on the ’794 patent and specifically Figure 2 (depicting “RF modem sectors”) and Figure 3 (depicting three ordinary cellular towers 12). (EX1001, 4:33–54, 7:44–49, 9:20–41, Figures 2–3; EX2007, ¶51.)

C. The Prior Art

1. Palmer

U.S. Patent No. 6,556,553 to Palmer et al. is entitled “Method for Determining When a Communication Device Should Rate Shift or Roam in a Wireless Environment.” (EX1004.) As its title suggests, Palmer focuses on methods related to determining if and when a “portable terminal/computer” (indexed as “20” in Figures 1 and 2, below, and hereinafter referred to as a “terminal”) should rate shift, roam, or do neither.



(EX1004, Figures 1–2.)

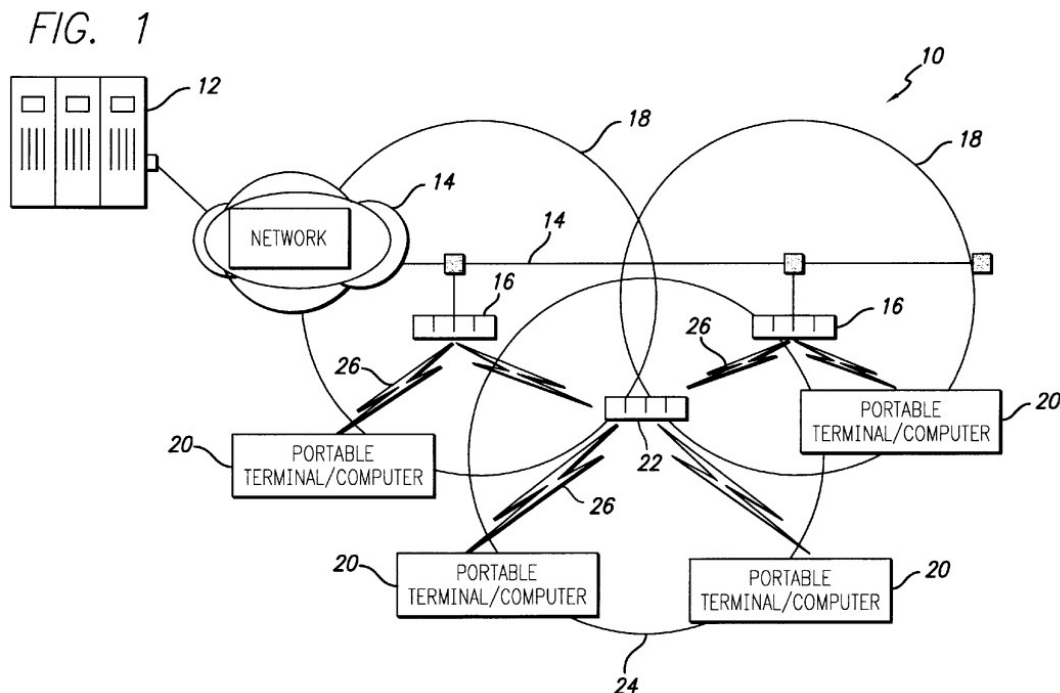
Palmer explains “rate shift” and “roam,” stating: “[i]f the RF connection begins to degrade, a determination should be made as to whether communication performance would improve by transmitting at a lower information rate or roaming

to another cell offering a higher quality RF connection.” (*Id.*, 5:26–30.) Therefore, a POSA would understand that, according to Palmer, “rate shift” refers to a terminal’s staying with the same access point 16 (in Fig. 1) or 40 (in Fig. 2), but lowering its information rate to get a more reliable connection (e.g., with lower bit error rate). (*Id.*, Figures 1–2, 5:26–30; EX2007, ¶62.) Alternatively, a POSA would understand that, according to Palmer, “roam” means to move completely to another cell and its access point, presumably one offering a higher quality RF connection. (EX1004, Figures 1–2, 5:26–30; EX2007, ¶62.)

Palmer explains that rate shifting and roaming are necessary, “[f]or example, in a WLAN,” when a “mobile worker...travels within a cell or from one cell to another.” (EX1004, 1:53–65.) Palmer further explains that then-existing protocols for rate shifting and roaming in a LAN were “relatively inflexible,” and “may result in the loss of a network connection.” (*Id.*, 2:7–30.) To address these issues, Palmer proposed a method that “improves communication by dynamically and flexibly anticipating when a rate shift or roam should occur.” (*Id.*, 2:60–65; EX2007, ¶63.)

Critically, Palmer focuses on a network of LANs connected to a wired network, and does not teach utilizing a wireless wide area network. Rather, with respect to its Figure 1 embodiment (shown in Figure 1, below), Palmer explains that its “communication system **10** includes a central host processor **12** connected

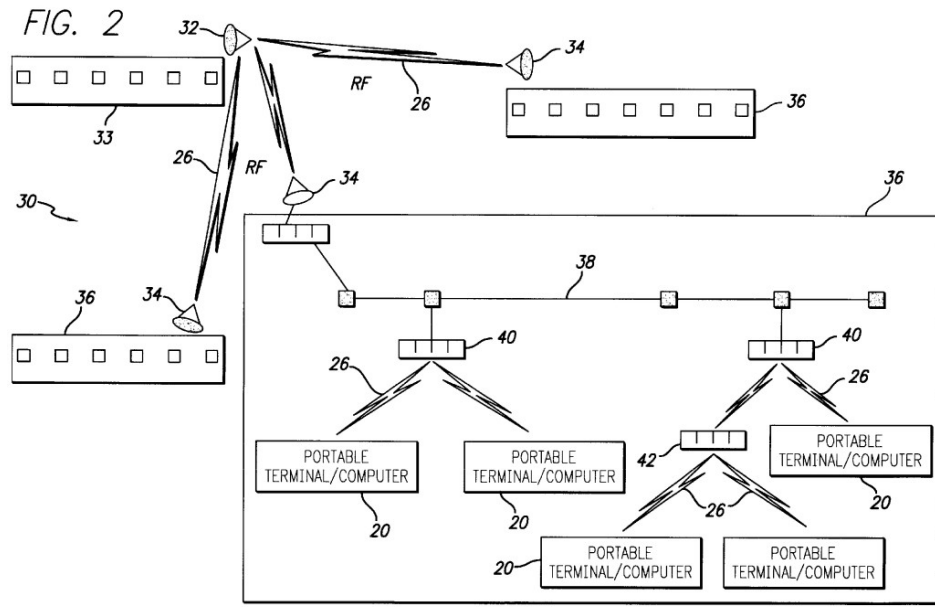
to a **wired network 14.**” (*Id.*, 4:27–28.) “The **wired network 14** has a plurality of access points **16** that are coupled to the **wired network.**” (*Id.*, 4:34–36.) Palmer’s WLAN “access point **16** acts as a bridge from the wireless communication [area] defined by its cell **18** to the wired network.” (*Id.*, 4:42–44; *see also id.*, 4:64–5:9 (explaining how the system shown in Figure 2 connects mobile devices to a wired network); EX2007, ¶64.)



(EX1004, Figure 1.)

In Palmer’s Figure 2 embodiment (below), as compared to its Figure 1 embodiment (above), the link from the central host processor 12 (or “administration building 33” in Figure 2, *see also* EX1004, 4:60–62) to the in-building wired network 14 (or wired network 38 in building 36 in Figure 2, *see*

also EX1004, 4:64–65) has been changed from wired to wireless. The wireless links labeled “26” connect administration building 33’s central antenna 32 with three antennas 34 at three building sites 36 respectively. (EX2007, ¶65.)



(EX1004, Figure 2.)

Palmer does not describe that its wireless system comprising antennas 32 and 34 is a wide area network (WAN) or a wireless wide area network (WWAN). (See generally, EX1004.) Only once does Palmer mention a WAN, and this is to say that a terminal 20 might have some additional WAN radio so “the wireless communication device 20 may also transition between buildings *or comprise part of a wireless wide area network.*” (*Id.*, 5:17–19; EX2007, ¶66.)

Palmer additionally teaches that the determination to rate shift or roam “could be made by the wireless communication device 20 having a processor and a

memory, with the processor executing a stored program for carrying out the method steps discussed below. Alternatively, the method steps may be performed centrally, for example, by the network or a central host processor.” (EX1004, 5:30–36.) Therefore, the determination is made either in a terminal 20, or in one of the centrally located devices such as network 14 or central host processor 12 (in Fig. 1), or a device in administration building 33 (in Figure 2). (*Id.*, Figures 1–2; EX2007, ¶70.)

2. Hohnstein

U.S. Patent No. 6,816,706 to Hohnstein et al. is entitled “Wireless Communication Access Point.” (EX1005, Cover.) Hohnstein’s Abstract describes:

A wireless access point includes at least one access antenna for communicating with wireless subscriber units. An access data terminal formats information packets for transmission by and after reception from each access antenna. At least one backhaul antenna interconnects the access point with the remainder of a wireless communication system. A backhaul data terminal formats information packets for transmission by and after reception from each backhaul antenna. Access data terminals and backhaul data terminals within the access point exchange information through baseband digital packets.

(EX1005, Abstract.) Hohnstein’s system is depicted as follows:

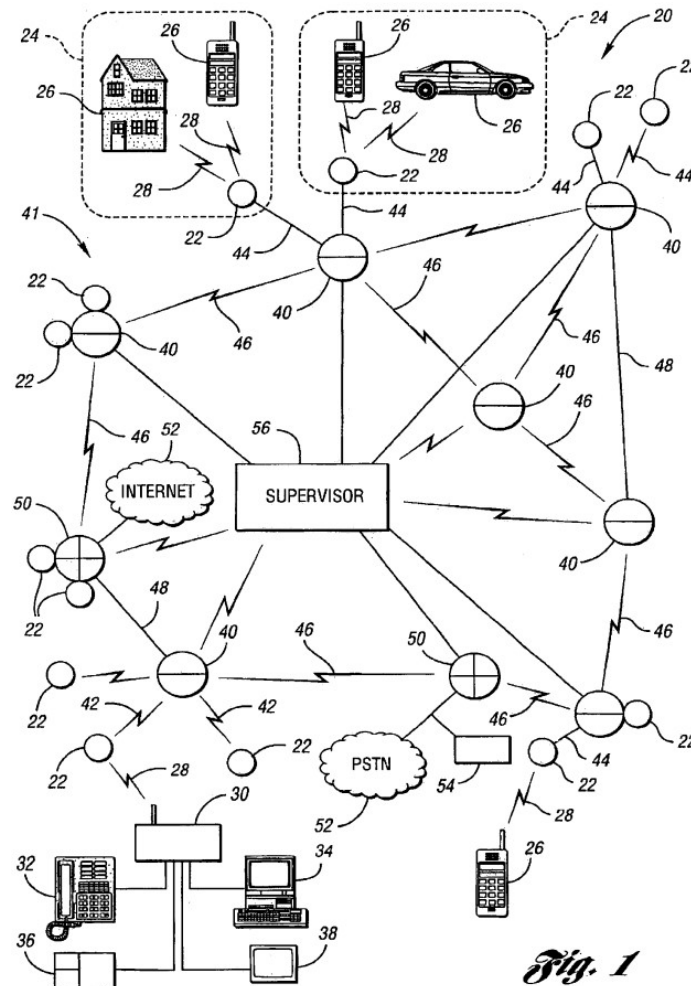


Fig. 1

(EX1005, Figure 1.) Each local radio access point 22 (“LRAP”) “defines coverage area 24 such as, for example, a cell, covering a reception range of access point 22.” (*Id.*, 4:12–14; EX2007, ¶92.)

Although Hohnstein’s Abstract states “[a]t least one backhaul antenna interconnects the access point with the remainder of a wireless communication system,” Hohnstein later states that “[a]ccess point 22 may be in contact with one or more radio access distribution points 40 over radio link 42, may be wired or cabled to distribution point 40 through wireline link 44, or may be packaged with

distribution point 40.” (*Id.*, 5:45–48.) A POSA would understand that the latter statement contradicts the former, as the latter indicates that an access point 22 does not necessarily have a backhaul antenna, and instead can connect to the distribution point network 40 in different ways. (*Id.*, Abstract, 5:45–48, Figures 1–2; EX2007, ¶93.) A POSA would further recognize that Hohnstein’s Figs. 1 and 2 match the latter statement by showing at least some access points 22 that only have a wired backhaul connection 44 rather than a wireless backhaul connection 42, and other access points 22 that touch a distribution point 40 (representing that the two are packaged as one unit). (EX1005, Abstract, 5:45–48, Figures 1–2; EX2007, ¶93.) As such, a POSA would understand that connections between access points 22 and distribution points 40 in Hohnstein can take on a variety of forms—including wired cable, wireless, or even within the same unit. (EX1005, Abstract, 5:45–48, Figures 1–2; EX2007, ¶93.)

Hohnstein also describes that connections between access points 22 and distribution points 40 are point-to-point, because each access point 22 has a dedicated front end interface in distribution point 40. (EX1005, 8:34–36 (“Distribution point 40 includes one or more front 35 end communication interfaces 100, each front end interface communicating with one access point 22”).) Hohnstein’s point-to-point connections are further depicted in Fig. 2, below, showing an expanded view of a distribution point 40 plus its connections to front-

end access points 22 and several back-end devices, such as other distribution points 40, Communication System 52 and Supervisor 56.

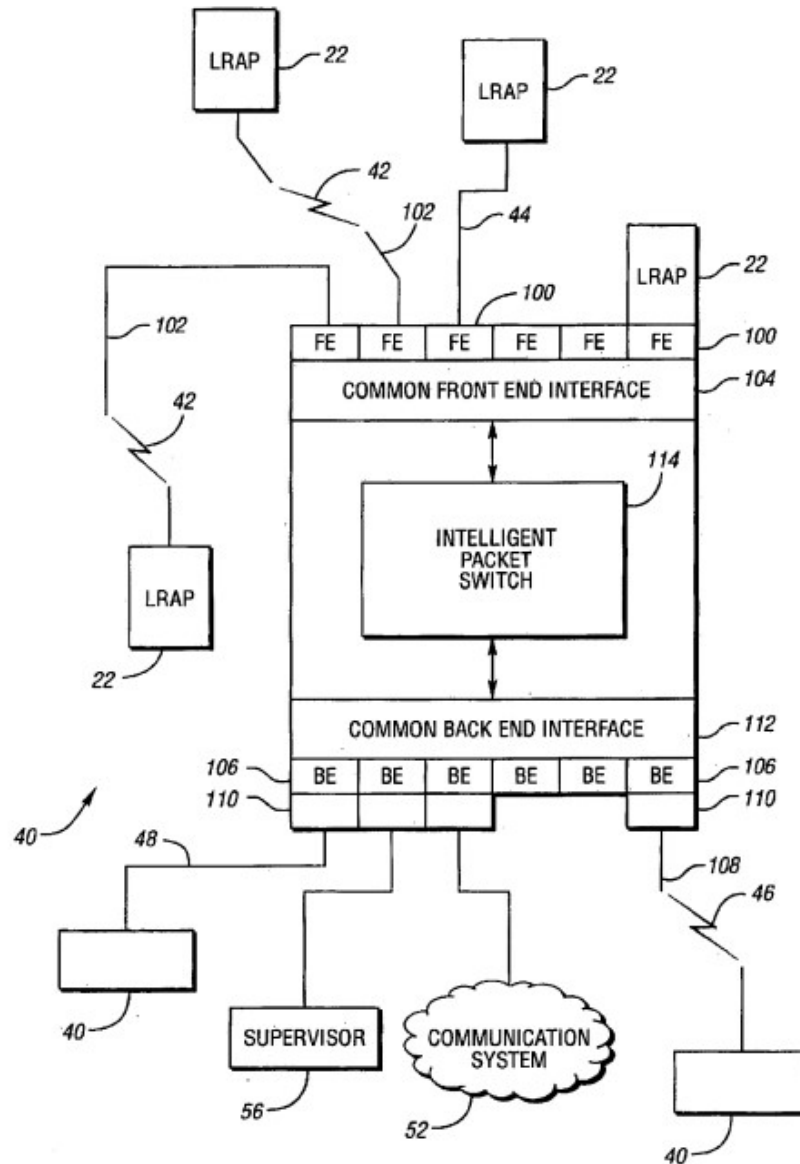


Fig. 2

(EX1005, Figure 2.)

Additionally, in Hohnstein, each distribution point 40 connects with one or more other distribution points 40 via point-to-point wired connections 48 or point-

to-point radio links 46. (EX2007, ¶96.) Such a network can be referred to as a “mesh network.” (See EX2013, 3; EX2007, ¶96.) Further, each component is an ATM/IP switch, with operation differing only based on what role each individual switch plays (at that time) within the overall mesh network:

Distribution points 40 are always peers at the IP and ATM layer, while access points 22 are clients of distribution points 40. As such, *each ATM/IP switch 300 functions as a server when operating as distribution point 40 and as a client when operating as access point 22.*

(EX1005, 11:15–20; EX2007, ¶96.)

Hohnstein contains two passages related to subscriber station signal quality. (EX1005, 5:1–29; 8:7–31; EX2007, ¶99.) The first passage discloses that an access point only transmits a signaling channel that subscriber stations monitor. (EX1005, 5:22–24; EX2007, ¶¶99–100.) Otherwise, the subscriber stations and the whole communication system 20 monitor a quality error bit rate of the whole system so that “[a]pplications providing services to subscriber unit 26 may adjust these services based on the quality error bit rate.” (EX1005, 5:1–29; EX2007, ¶100.) The second passage discloses that “[a]ccess point 22 may determine the absence of subscriber unit 26 from coverage area 24 if no communication is received after a particular time interval.” (*Id.*, 8:25–28; EX2007, ¶¶99, 101.)

3. Mahany

U.S. Patent No. 6,816,706 to Mahany et al. is entitled “Hierarchical Communication System Providing Intelligent Data, Program and Processing Migration.” (EX1006, Cover.) Mahany’s Abstract describes:

A hierarchical communication system, arranged in a spanning tree configuration, is described in which wired and wireless communication networks exhibiting substantially different characteristics are employed in an overall scheme to link portable or mobile computing devices. Copies of data, program code and processing resources are migrated from their source toward requesting destinations based on request frequency, communication link costs and available local storage and/or processing resources. Each appropriately configured network device acts as an active participant in network migration. In addition, portable two-dimensional (2-D) code reading terminals are configured to wirelessly communicate compressed 2-D images toward stationary access servers that identify the code image through decoding and through comparison with a database of images that have previously been decoded and stored.

(EX1006, Abstract.) Mahany’s “hierarchical communication system” is primarily a hierarchy of LANs. Figure 1b, below, shows the hierarchy of a “First Local Area Network 37” and a “Second Local Area Network (Microlink Network) 40”:

Moreover WANs require relatively higher transmission power—a negative factor in the ever increasing need for power savings associated with portable transceiving devices. As a result, WANs are generally slow and expensive. and simply do not provide an effective overall solution.

(*Id.*, 3:9–20.) Mahany goes on to characterize WANs as being “relatively expensive” and having “delayed services.” (*Id.*, 3:40–43.) Based on this discussion and others in Mahany, a POSA would understand that Mahany disparages wireless WANs, describing them as: 1) point-to-point communication links, 2) distinct from any hierarchical LAN networks of its invention, and 3) only to be used as a last resort when a WLAN connection is not available. (*See id.*, 3:41–44, 45:40–48, 46:22–42, 48:55–65; EX2007, ¶122.)

4. Agrawal

U.S. Patent No. 5,722,051 to Agrawal et al. is entitled “Adaptive Power Control and Coding Scheme for Mobile Radio Systems.” (EX1007, Cover.)

Agrawal’s Abstract describes:

A dynamic combined power control and forward error correction control (FEC) technique for mobile radio systems which illustratively decreases the power consumed by wireless transmitters and increases the number of simultaneous connections which may be supported thereby. Individual transmitter-receiver pairs may adaptively determine the minimal power and FEC required to satisfy specified quality-of-service (QOS) constraints. Specifically, in accordance with an

illustrative embodiment of the present invention, a first portion of a signal is encoded with a first code to generate a first encoded signal portion. Then, the first encoded signal portion is transmitted with a first power level. Next, parameter data is received, wherein the parameter data is representative of one or more characteristics of a received signal portion having been received by the receiver, the received signal portion having been based on the transmitted first encoded signal portion. A second code and a second power level is then determined based on the received parameter data, and a second portion of the signal is encoded with the second code to generate a second encoded signal portion. Finally, the second encoded signal portion is transmitted with the second power level.

(EX1007, Abstract.)

Per its title and Abstract, Agrawal describes power and FEC control in a mobile radio system. (*Id.*) Other than describing its invention as applicable to cellular mobile radio systems, Agrawal does not disclose WANs. (*See generally*, EX1007.) Agrawal also does not disclose WLANs or their respective architectures. (*Id.*) Moreover, the second transceiver in the '794 patent—which operates according to a WLAN protocol—has a specific role and function in the '794 patent's claims: to monitor the signal characteristics of the LAN devices and route information accordingly. (*Id.*; EX2007, ¶132)

III. CLAIM CONSTRUCTION

In related district court litigation, on January 12, 2024, Judge Gilstrap of the United States District Court for the Eastern District of Texas construed several terms of the '794 patent. Those constructions are listed below:

Term	Court's Construction
“wireless communication device[s]” (’794 Patent, Claims 1–6)	Plain and ordinary meaning. Specifically, there is no requirement that the wireless communication device be fixed.
“first wireless transceiver operable to communicate with a base station” (’794 Patent, Claims 1, 6)	Plain and ordinary meaning. Specifically, there is no requirement that the first wireless transceiver be fixed.
“[routes/routing] information to the first mobile station and the second mobile station, respectively” (’794 Patent, Claims 1, 6)	“[directs/directing] information through a specified path to the first mobile station and the second mobile station, respectively”

(EX2006, 20–24.)

Particularly relevant to Petitioner’s Grounds is the district court’s construction of “[routes/routing] information to the first mobile station and the second mobile station, respectively” as “[directs/directing] information through a specified path to the first mobile station and the second mobile station, respectively.” (EX2006, 21–24.) Petitioner argued for such a construction, while Patent Owner argued for plain and ordinary meaning. (*See, id.*) In so ruling, the district court noted “that simply ‘forwarding information,’ without more, is not

‘routing’ because the intrinsic evidence (citing EX1001, 8:61–9:3, 9:6–19) and “cited definitions show the ordinary meaning of ‘routing’ requires a specific path.” (*Id.*, 22–23; EX2007, ¶¶60.)

IV. ARGUMENT

A. Ground 1: Palmer Fails to Disclose or Obviate Each Element of Challenged Claims 1–4 and 6.

In Ground 1, Petitioner asserts that Palmer anticipates and/or renders obvious Challenged Claims 1–4 and 6. (Petition, 11.) But Palmer does not disclose at least three elements of independent claims 1 and 6: (1) “a first wireless transceiver operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol,” (2) “wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, routes information to the first mobile station and the second mobile station, respectively,” or (3) a “wireless communication device, comprising: a first wireless transceiver...and a second wireless transceiver coupled to the first wireless transceiver” as the Challenged Claims recite. (EX2007, ¶¶74–88.)

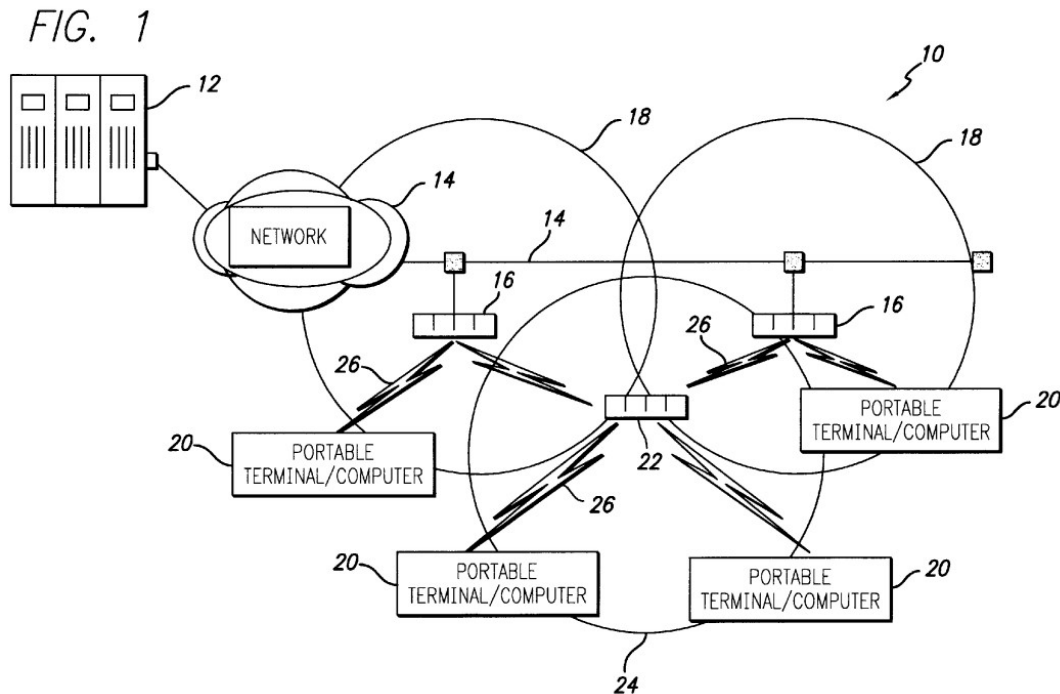
The Petitioner's evidence that these elements are in Palmer is based on a mischaracterization of Palmer, and contrary to the knowledge of a POSA.

1. **[1.a] Palmer does not disclose or obviate “a first wireless transceiver operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol” as the Challenged Claims recite.**

All claims of the '794 patent require a first wireless transceiver that is “operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol.” (EX1001, 10:18–22 (claim 1), 10:59–63 (claim 6)). But Palmer does not teach or disclose that its communication system 30 is a WWAN. (EX2007, ¶75.) In fact, Palmer provides just the opposite, that its communication system 30 is not a WAN. (*Id.*)

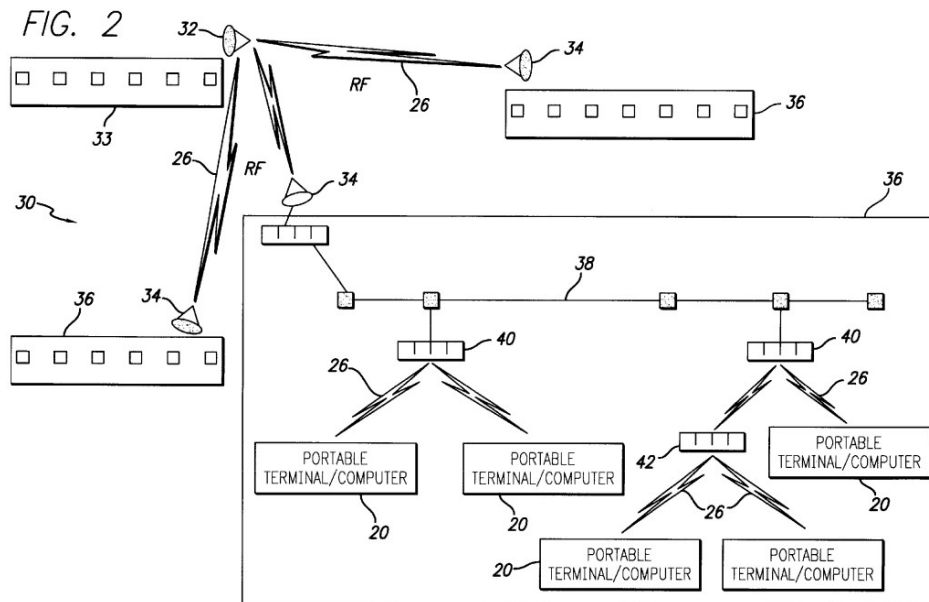
Critically, Palmer focuses on a network of LANs connected to a wired network, and does not teach utilizing a wireless wide area network. (EX2007, ¶64.) With respect to its Figure 1 embodiment (shown in Figure 1, below), Palmer explains that its “communication system **10** includes a central host processor **12** connected to a **wired network 14**.” (*Id.*, 4:27–28.) “The **wired network 14** has a plurality of access points **16** that are coupled to the **wired network**.” (*Id.*, 4:34–36.) Palmer's WLAN “access point **16** acts as a bridge from the wireless

communication [area] defined by its cell **18** to the wired network.” (*Id.*, 4:42–44; *see also id.*, 4:64–5:9 (explaining how the system shown in Figure 2 connects mobile devices to a wired network); (EX2007, ¶64).)



(EX1004, Figure 1.)

In Palmer’s Figure 2 embodiment (below), as compared to its Figure 1 embodiment (above), the link from the central host processor 12 (or “administration building 33” in Figure 2, *see also* EX1004, 4:60–62) to the in-building wired network 14 (or wired network 38 in building 36 in Figure 2, *see also* EX1004, 4:64–65) has been changed from wired to wireless. The wireless links labeled “26” connect administration building 33’s central antenna 32 with three antennas 34 at three building sites 36 respectively. (EX2007, ¶65.)



(EX1004, Figure 2.)

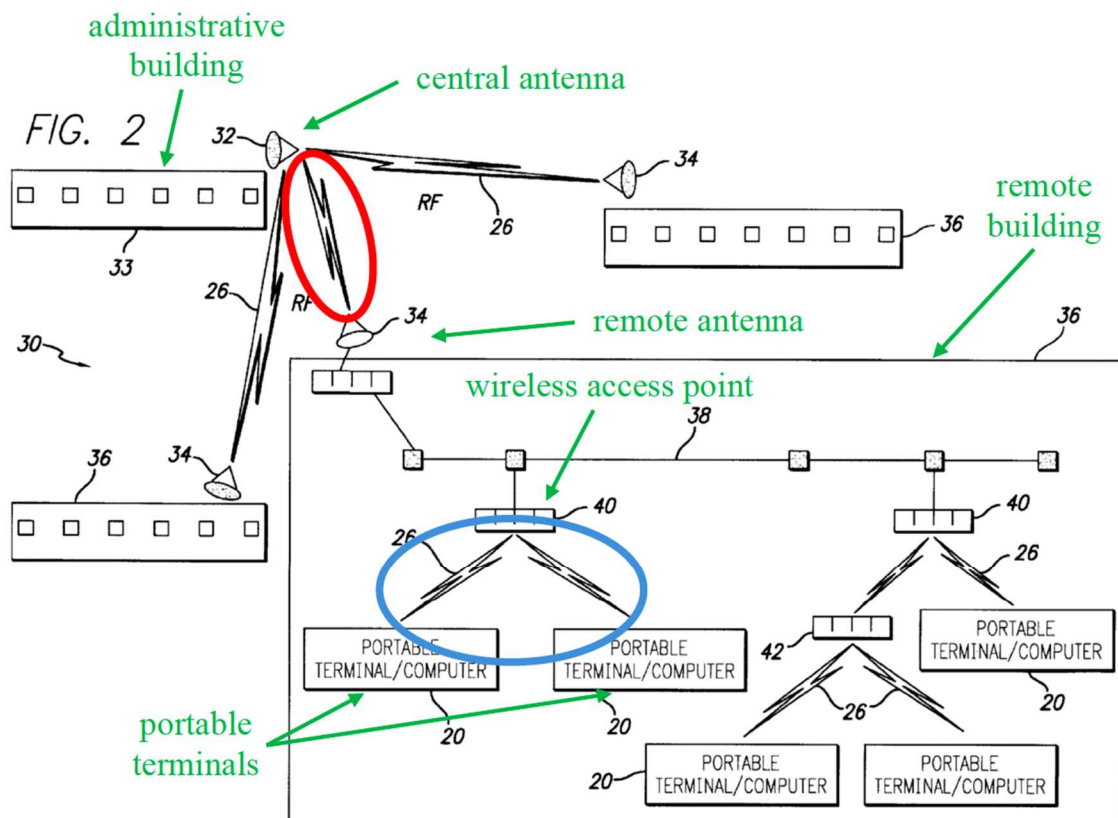
Palmer does not describe that its wireless system comprising antennas 32 and 34 is a wide area network (WAN) or a wireless wide area network (WWAN). (See generally, EX1004.) Only once does Palmer mention a WAN, and this is to say that terminal 20 might have some additional WAN radio so “the wireless communication device 20 may also transition between buildings *or comprise part of a wireless wide area network.*” (*Id.*, 5:17–19.) This statement thus makes clear to a POSA that 1) it is possible for a terminal 20 to transition between buildings by roaming from one coverage area 18 to another (presuming coverage overlap between them), 2) Palmer knows what a WWAN is, and 3) Palmer considers a WWAN to be something external to its device. (EX2007, ¶66.)

Specifically, Palmer recognizes that if a terminal 20 moves from one building 36 to another building 36, it may lose coverage within Palmer's system. (EX2007, ¶67.) Therefore, to stay connected to the administration building 33 in this scenario, Palmer teaches that terminal 20 may also "comprise part of a [WWAN]," meaning that it incorporates an added WWAN transceiver so that it can connect to an otherwise undescribed WWAN network. (EX1004, 5:17–19.) A POSA would further recognize that if Palmer considered its antennas 32 and 34 to be part of a WWAN, Palmer would have described terminal 20 as having an *additional* WWAN transceiver to connect to antenna 32, rather than explaining that terminal 20 could attach to some *other* WWAN. (EX2007, ¶67.)

For these reasons, POSA would understand that Palmer does not disclose a WWAN in its invention, and in fact teaches that its invention does *not* utilize a WAN. (EX2007, ¶¶68, 75.) A POSA would further recognize that without utilizing a WWAN, Palmer also does not disclose a WWAN *protocol* in its invention. (EX2007, ¶75.) Thus, Palmer does not disclose a WWAN protocol or a first wireless transceiver operable to communicate with a base station that communicates according to a single WWAN protocol, as the Challenged Claims recite. (EX1001, 10:18–22, 10:59–63; EX2007, ¶75.)

For this element of the Challenged Claims, Petitioner argues that "Palmer's system includes a central antenna 32 provided on a central administration building

33 that communicates wirelessly with remote antennas 34 in various remote buildings.” (Petition, 11.) The Petitioner provides the following annotation of Palmer’s Figure 2, and argues that central antenna 32 satisfies the base station limitations:



(*Id.*, 12.) But Petitioner cites no evidence that “central antenna 32” communicates according to wide area wireless communication protocols because it does not.

Although Palmer states that “[t]he communication system 30 includes a central antenna 32 that communicates through RF links 26 to a plurality of remote antennas 34,” Palmer does not describe these RF links, much less disclose any protocols associated with them. (EX1004, 4:57–59; EX2007, ¶76.) Instead, Palmer

merely discloses that “[t]he radio frequency (RF) wireless links are represented symbolically by RF links 26.” (EX1004, 4:40–42; EX2007, ¶76.) Especially by use of the word “symbolically,” a POSA would understand that Palmer generalizes these RF links to be any kind or assortment of RF connections. (EX2007, ¶76.) Therefore, even if a POSA assumed that Palmer’s communication system 30 is a WWAN (they would not), that POSA still would recognize that Palmer does not disclose a “base station [that] communicates with the first wireless transceiver and a plurality of other wireless communication devices according to **a wide area wireless communication protocol**” as the Challenged Claims recite. (*See* EX1001, 10:18–22; EX2007, ¶76.)

Unable to locate any disclosure in Palmer that “central antenna 32” operates according to a wide area wireless communication protocol, Petitioner argues that geography alone should suffice—citing Palmer’s disclosure that its system “could span an entire ‘city,’ which would have prompted use of wide area protocols.” (Petition, 19 (citing EX1002, ¶¶73–82.) But as described above, Palmer does not disclose a WWAN, and in fact refers to a WWAN as distinct from its invention. (EX2007, ¶84.) Further, as support for this proposition, Petitioner relies on its expert’s recital of an excerpt from Palmer stating that “[t]he method would further reduce network connection losses due to the *use of industry standard network protocols* by the wireless media.” (EX1002, ¶78 (quoting EX1004, 2:52–55)

(emphasis in EX1002).) Petitioner’s expert then argued that “[a] POSA would have therefore understood based on these teachings in Palmer that a wide area wireless communication protocol is used for the wireless transmissions between central antenna 32 and the multiple remote antennas 34.” (EX1002, ¶79.)

However, a POSA would recognize that Palmer only discusses rate shift or roam with respect to its *local cells 18*, not with respect to the wireless transmissions *between central antenna 32 and the multiple remote antennas 34*. (See generally, Ex. 1004; EX2007, ¶84.) For this reason, a POSA would understand that Palmer’s discussion of “industry standard network protocols” applies only to the *local network*. Thus, this disclosure in Palmer does not describe wireless transmissions between central antenna 32 and the multiple remote antennas 34 as being standardized, or as being part of a WWAN or using a WWAN protocol. (EX2007, ¶84.)

Moreover, Petitioner’s expert relied upon the portion of Palmer that actually **disparages** the existing “industry standard network protocols,” and explains instead how its method differs from—and improves upon—those protocols. (EX2007, ¶85.) Specifically, Palmer states:

Accordingly, it would be desirable to provide a method for determining when a communication device should rate shift or roam in a wireless environment. The method would improve communication connections and performance by reducing the number of required retransmissions,

offer an optimum bandwidth, and faster response time. **The method would further reduce network connection losses due to the use of industry standard network protocols** by the wireless media. Furthermore, the method would be flexible and anticipate the rate shift and roam requirements, even as the communication environment evolves.

(EX1004, 2:47–57.) In context, Palmer discusses how its method would reduce the “network connection losses” that occur when using the “industry standard network protocols.” (EX2007, ¶85.)

Thus, contrary to Petitioner’s arguments, Palmer does not disclose or obviate a first wireless transceiver that is “operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol” as the Challenged Claims recite (EX1001, 10:18–22, 10:59–63; EX2007, ¶¶75–76.) For these reasons, Petitioner’s Ground 1 challenge must fail.

2. **[1.pre] and [1.b] Palmer does not disclose or obviate “a “wireless communication device, comprising: a first wireless transceiver...and a second wireless transceiver coupled to the first wireless transceiver” as the Challenged Claims recite.**

The Challenged Claims also recite a wireless communication device that comprises a first wireless transceiver and a second wireless transceiver. (EX1001, 10:17–56.) Put another way, the first wireless transceiver and second wireless

transceiver must be part of the same device. (EX2007, ¶77.) Challenged Claims 2–5 each recite various configurations of the two claimed transceivers, but each of these configurations is still a single device, as opposed to two devices connected by an additional, distinct network containing other devices. (See EX1001, 10:17–56; EX2007, ¶77.) Specifically, Challenged Claim 2 recites that the two transceivers may be connected by a wireline connection (i.e., a cable); Challenged Claim 3 recites that they may be in separate enclosures that are detachable from each other; Challenged Claim 4 recites the device may be at a fixed site; and Challenged Claim 5 recites that they may be integrated together in the same enclosure. (See EX1001, 10:48–56.)

However, there is no embodiment in the '794 patent—in the claims or elsewhere—whereby the first and second wireless transceivers are separated by an *entire additional network*, as the remote antenna 34 and the access points 40 are in Palmer.² (See *generally*, Ex. 1001; Ex. 1004 at Fig. 2, 4:64–5:3 (“The building 36

² In Palmer’s Figure 2, remote antenna 34 is connected to an unlabeled box on wired network 38. (EX1004, Figure 2; EX2007, ¶77 n.4.) A POSA would understand this box to be a bridge between the wireless connection and the wired network 38, and would thereby include a transceiver for the wireless connection and a transceiver for the wired network 38. (EX2007, ¶77 n.4.)

may include a *wired network 38* with a plurality of access points 40.... The access point 40 would provide a bridge for the wireless communication devices 20 to the *wired network 38*"); EX2007, ¶77). Indeed, Petitioner's expert recognizes that Palmer's remote antenna 34 (and its associated, unlabeled box in Fig. 2) are separated from access points 40 by an entirely separate, additional wired LAN 38. (EX1002, ¶¶ 69–72.) To the extent remote antenna 34 may have an additional transceiver, it would be only to connect to the entirely separate, additional wired LAN 38. (EX1004, Fig. 2; EX2007, ¶78.) Likewise, to the extent access points 40 may have an additional transceiver, it would be only to connect to the entirely separate, additional wired LAN 38. (EX1004, Fig. 2; EX2007, ¶78.)

A POSA would further recognize that different devices connected by a wired network 38, i.e., a wired LAN, are in fact *different devices*, rather than a single device. (EX2007, ¶77; *see, e.g.* Ex. 2009, 3 (Newton's Telecom Dictionary, defining LAN as "[a] short distance data communications network (typically within a building or campus) used to link **computers** and peripheral **devices** (such as printers, CD ROMs, **modems**) under some form of standard control").)

Acknowledging this fact, Petitioner's expert opines, in view of Palmer's remote antenna 34 and its access points 40, that integration of these components within a single device would have been obvious. (EX1002, ¶70.) But this is incorrect for at least two reasons: in Palmer, (1) there are *multiple access points* 40

for each remote antenna 34, and (2) access points 40 are *meant* to be spread around the building and to be geographically away from remote antenna 34, as opposed to being co-located. (EX2007, ¶¶78–80.) Thus, Palmer *requires* there to be a LAN, and for the remote antenna 34 to be a distinct device from each access point 40. (EX2007, ¶80.) Therefore, a POSA studying Palmer would have found no motivation to combine these distinct devices into one, or to configure the system to have each remote antenna 34 connected to its own, single, dedicated access point 40. (*Id.*)

In other words, Palmer’s architecture as discussed above reveals a fundamental difference between Palmer and the ’794 patent that would have been evident to a POSA. (EX2007, ¶81.) Specifically, the ’794 patent’s claimed device and method enable hotspot operation. (*Id.*) In a system comprising a one-to-many cellular-style WWAN, the ’794 patent’s device is a WWAN transceiver with its own WLAN transceiver, which then provides one-to-many WLAN service. (*Id.*)

By contrast, Palmer does not disclose a WWAN, a one-to-many cellular-style WWAN, or that its transceiver supporting RF link 26 (in Figure 2) has its own WLAN transceiver. (*Id.*) In fact, Palmer teaches the opposite. (*Id.*) Specifically, its transceiver supporting RF link 26 (in Fig. 2) is a separate device from any WLAN transceiver, and the two are connected via an additional LAN network, in contrast to the Challenged Claims which recite a wireless

communication device that comprises a first wireless transceiver and a second wireless transceiver. (EX1001, 10:17–56; EX2007, ¶81.) For these additional reasons, Petitioner’s Ground 1 challenge must fail.

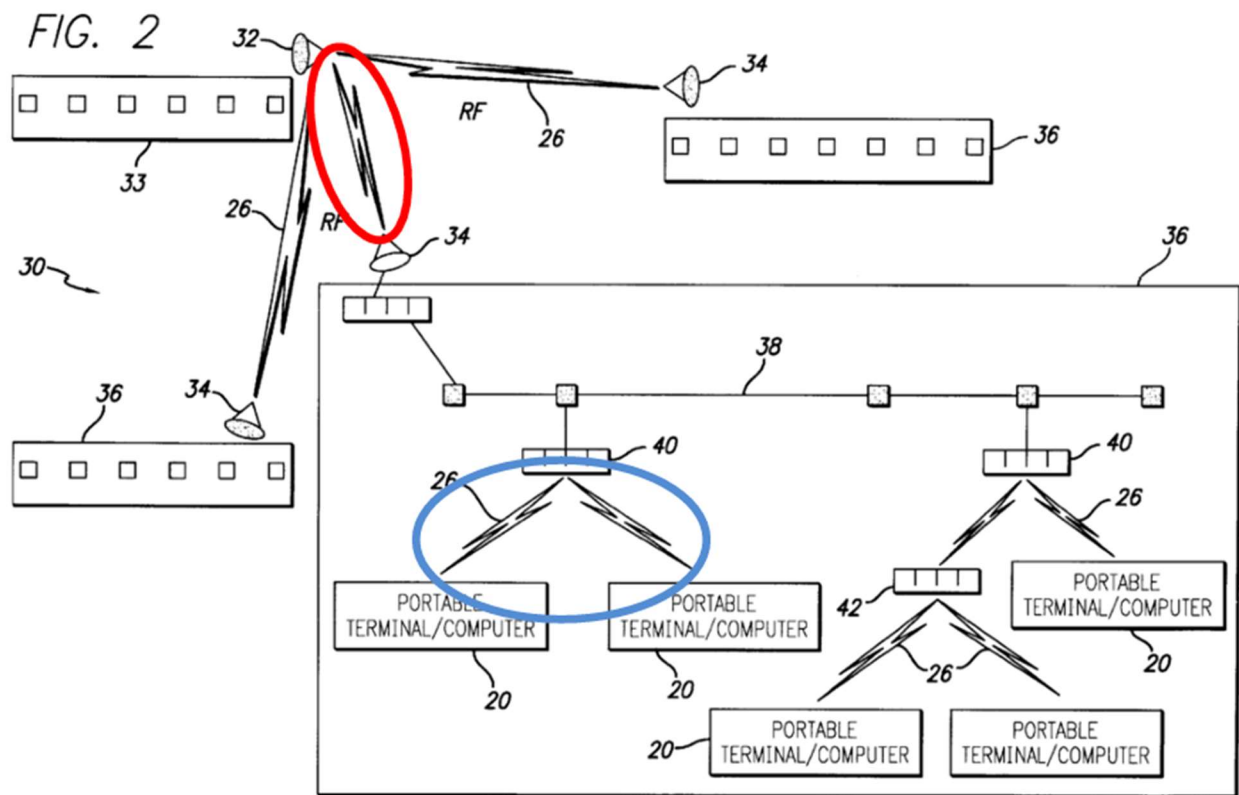
3. **[1.c] Palmer does not disclose or obviate “wherein the first wireless transceiver receives from the base station a first downlink signal...and wherein the second wireless transceiver receives the first downlink signal and re-transmits the first downlink signal to the first mobile station as a second downlink signal according to the local area wireless communication protocol” as the Challenged Claims recite.**

The Challenged Claims each recite “wherein the first wireless transceiver receives from the base station a first downlink signal...and wherein the second wireless transceiver receives the first downlink signal and re-transmits the first downlink signal to the first mobile station as a second downlink signal according to the local area wireless communication protocol.” (EX1001, 10:30–37.) But as described in Sections IV.A.1. and IV.A.2. above, Palmer does not disclose a first wireless transceiver and a second wireless transceiver as claimed. (EX2007, ¶82.) Instead, in Palmer, the first wireless transceiver and second wireless transceiver are separated by a local area network with its own protocol. (EX2007, ¶82.) For this additional reason, Petitioner’s Ground 1 challenge must fail.

4. **[1.d] Palmer does not disclose or obviate “wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, routes information to the first mobile station and the second mobile station, respectively,” as the Challenged Claims recite.**

The Challenged Claims each require a “second transceiver” that is “operable to directly communicate” with a first and second mobile station “according to a local area wireless communication protocol,” monitors “signal characteristics” of the LAN devices and, “based on” those characteristics, “routes information to the first mobile station and the second mobile station.” (EX1001, 10:23–29, 10:38–44 (claim 1)), 10:64–11:3, 11:14–22 (claim 6).) Palmer does not disclose this limitation because Palmer’s alleged second transceiver neither monitors signal characteristics nor routes information to the mobile stations as the Challenged Claims recite. (*See id.*)

Petitioner asserts that Palmer’s “wireless access point 40” is the “second wireless transceiver” recited by the Challenged Claims. (Petition, 20.) Palmer’s wireless access point 40 is circled in blue in the Petitioner’s annotated version of Figure 2, below. (*Id.*, 15.)



(EX1004, Figure 2 (annotated).)

Petitioner further argues that Palmer’s access point 40 could also make a decision to rate shift or roam—as recited by the Challenged Claims—stating that “Palmer’s access point 40 performs such monitoring, as Palmer describes monitoring ‘may be performed centrally, for example, by the network’” (Petition, 25 (quoting EX1004, 5:34–36).) Petitioner’s expert additionally argues that “the access point 40 is part of the network and the specific component directly interacting wirelessly with the portable terminals 20 and therefore collecting such measurements.” (EX1002, ¶95.)

By contrast, a POSA would recognize that an access point does not qualify as “centrally, for example, by the network or a central host processor.” (EX2007, ¶71.) Rather, a POSA would understand that Palmer’s reference to “the network” refers to one of the centrally located devices such as network 14 or central host processor 12 (in Figure 1), or a device in administration building 33 (in Figure 2). (EX1004, Figures 1–2; EX2007, ¶71.) As such, Palmer describes that only terminal 20, the centrally located devices such as network 14 or central host processor 12 (in Figure 1), or a device in administration building 33 (in Figure 2), perform measurements for making rate or roam decisions. (EX1004, 5:19–36, Figures 1–2; EX2007, ¶86.)

Further, Petitioner’s citations do not support its allegations that Palmer supposedly discloses that access point 40 monitors signal characteristics of the mobile devices and routes information based on monitoring those signal characteristics. For instance, the Petition cites to a description of a “predictive method” as shown in Palmer’s Figure 3 in support of this proposition, but Palmer’s Figure 3 says absolutely nothing about access point 40 monitoring signal characteristics, nor does it even include a general disclosure that addresses this claim element. (*See* Petition, 24–25; *see also* EX1004, 5:19–47; EX2007, ¶72.) To the contrary, the passage that immediately precedes that relied upon by Petitioner explains that other parts of Palmer’s system—not access point 40—perform the

functions that the Petitioner alleges meet the monitoring signal characteristics limitations. Specifically, Palmer refers to examining the RF connection to the mobile devices, particularly when that signal starts to degrade, and details: “[t]his **determination could be made by the wireless communication device 20** having a processor and a memory, with the processor executing a stored program for carrying out the method steps discussed below. **Alternatively, the method steps may be performed centrally, for example, by the network** or a central host processor.” (EX1004, 5:19–36.) Thus, as discussed above, Palmer discloses that the “predictive method” that the Petitioner claims is “monitoring signal characteristics” is done either by the mobile station 20 in Palmer, or by the central network. Palmer makes no reference to what the Petitioner identifies as its second transceiver or the LAN transceiver—access point 40—in this passage. (*See id.*; EX2007, ¶72.)

Moreover, even if Palmer did disclose that an access point monitors signal characteristics (it does not), including even signal characteristics of two distinct mobile stations (it does not), Palmer still does not disclose “based on the first signal characteristics and the second characteristics, direct[ing] information through a specified path to the first mobile station and the second mobile station, respectively” as the Challenged Claims recite. (EX2007, ¶73.) At most, Palmer only teaches making a decision by *one mobile station* to rate shift or roam. (*Id.*)

Finally, as described in Section III., Judge Gilstrap in the Eastern District of Texas has recently construed “[routes/routing] information to the first mobile station and the second mobile station, respectively” to mean “[directs/directing] information through a specified path to the first mobile station and the second mobile station, respectively.” (EX1006, 21–24.) Under this construction, the last element of the ’794 patent’s Challenged Claim 1 is interpreted to mean, “wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, directs information through a specified path to the first mobile station and the second mobile station, respectively.” (EX2007, ¶¶59–60.)

Notably, before the district court, Petitioner has taken the position that no WLAN transceiver can *ever* “route” information as the Challenged Claims recite, under the district court’s construction of the term. Specifically, Petitioner’s expert in that related litigation asserted that “[r]outing as a network concept, and as construed by the Court, does not occur in Wi-Fi.” (EX2010, 10.) Petitioner’s expert went on to argue that “[i]n other words, ‘routing’—under the Court’s construction requiring more than merely forwarding packets—cannot occur at the WLAN transmitter.” (EX2010, 10.) In so arguing, Petitioner explained to the district court that “[t]he prior art IEEE 802.11 WLAN protocol in existence at the

time of the application—what [the ’794 inventor] called ‘the de facto worldwide wireless LAN standard’—explicitly states that ‘routing is not to be used’ in the access point and the ‘routing information parameter must be null’ in the MAC layer transmission from an access point.” (EX2011, 19 (citation omitted); EX2007, ¶¶87–88.)

Petitioner cannot square how “routing information” as construed in the district court is an impossibility with its position here that Palmer and other references disclose this limitation as obvious. (*See, e.g.*, EX2014, 20:11–22:3 (Petitioner’s expert testifying that in this IPR, applying the district court’s construction of “routing information” does not change his opinions in this IPR that Palmer and other references disclose this limitation as obvious).) Petitioner’s litigation position is unequivocal—no WLAN transceiver has ever routed information and therefore it does not infringe. Fundamental fairness dictates Petitioner cannot argue non-infringement based on sheer impossibility, and at the same time tell the PTAB such a limitation is obvious based on its other expert somehow finding the limitation in the prior art. *See Ultratec, Inc. v. CaptionCall, LLC*, 872 F.3d 1267, 1272–73 (Fed. Cir. 2017) (noting that it would “be in the interest of justice to consider sworn inconsistent testimony on the identical issue,” which “would be highly relevant to both the Board’s analysis of the specific issues

on which [the expert] gave inconsistent testimony and to the Board’s overall view of his credibility.”).

For each of these reasons, Palmer does not disclose or obviate a “second transceiver” that is “operable to directly communicate” with a first and second mobile station “according to a local area wireless communication protocol,” monitors “signal characteristics” of the LAN devices and, “based on” those characteristics, “routes information to the first mobile station and the second mobile station.” (EX1001, 10:23–29, 10:38–44, 10:64–11:3, 11:14–22; EX2007, ¶83.) For these additional reasons, Petitioner’s Ground 1 challenge must fail.

5. Palmer does not disclose or obviate Challenged Claims 2–4 or 6.

Because Challenged Claims 2–4 depend from claim 1, Petitioner’s Ground 1 challenge to claims 2–4 fails for the same reasons as discussed for claim 1, above. (EX2007, ¶¶89, 91.) Additionally, as described in Section IV.A.2., Palmer does not disclose a first and second transceiver that are coupled by a wireline connection (claim 2); instead, they are connected by an entirely separate local area network. (EX2007, ¶89.) Palmer also does disclose a first and second transceiver that are removably coupled (claim 3) or disposed in a fixed site subscriber station (claim 4). (*Id.*)

Claim 6 is a method claim version of apparatus claim 1. (EX2007, ¶90.) Therefore, Petitioner’s Ground 1 challenge to claim 6 fails for the same reasons as

discussed for claim 1, above. (EX2007, ¶¶90–91.)

B. Ground 2: Palmer + Hohnstein Fails to Disclose or Obviate the Challenged Claims.

Petitioner’s starting premise for Ground 2 is that the PTAB already found “similar claims” unpatentable based on Hohnstein in the ’555 IPR. (Petition, 1.) However, as the Board found in its Institution Decision, “[t]he claims of the two patents contain substantive differences, and the prior IPR was decided under a broadest reasonable claim construction standard,” such that the parties “should focus on the issues currently before us rather than what transpired in the prior IPR.” (ID, 31, n.6.)

1. **[1.a] Palmer + Hohnstein does not disclose or obviate “a first wireless transceiver operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol” as the Challenged Claims recite.**

All claims of the ’794 patent require a first wireless transceiver that is “operable to communicate with a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol.” (EX1001, 10:18–22 (claim 1), 10:59–63 (claim 6)). In addressing this limitation, as with Palmer, Petitioner fails to show that Hohnstein discloses that “the base station communicates with the first wireless transceiver and a plurality of

other wireless communication devices **according to a wide area wireless communication protocol**” as the Challenged Claims recite. (*Id.*; EX1002, ¶¶ 116–121, 123, 133–141; EX2007, ¶105.)

Specifically, Petitioner argues that “Hohnstein describes a first wireless transceiver (*e.g.*, backhaul system 550, including backhaul antenna 552 and backhaul data terminal 554) operable to communicate with a base station (*e.g.*, another distribution point 40) over a wireless link 42 (also referenced in Hohnstein as ‘backhaul communication’).” (Petition, 49.) However, a POSA would understand that Hohnstein’s described system does *not* disclose “a base station, wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol” as the Challenged Claims recite. (EX2007, ¶106.) Instead, a POSA would recognize that Hohnstein teaches an older, point-to-point backhaul arrangement that, to the extent Hohnstein’s system can be considered a WWAN at all, does not use one point-to-multipoint WWAN protocol as recited by the Challenged Claims. (*Id.*)

Specifically, Hohnstein describes its system—upon which Petitioner relies—as a point-to-point link, stating that “[t]ypically, backhaul antenna 552 is a directional antenna aimed at a corresponding antenna at another location.” (EX1004, 15:18–20; EX2007, ¶106.) Indeed, a POSA would recognize that

Hohnstein describes that connections between access points 22 and distribution points 40 are point-to-point, because each access point 22 has a dedicated front end interface in distribution point 40. (EX2007, ¶106; EX1005, 8:34–36 (“Distribution point 40 includes one or more front 35 end communication interfaces 100, each front end interface communicating with one access point 22”).) Hohnstein’s point-to-point connections are further depicted in Fig. 2, below, showing an expanded view of a distribution point 40 plus its connections to front-end access points 22 and several back-end devices, such as other distribution points 40, Communication System 52 and Supervisor 56. (EX2007, ¶¶93–94.)

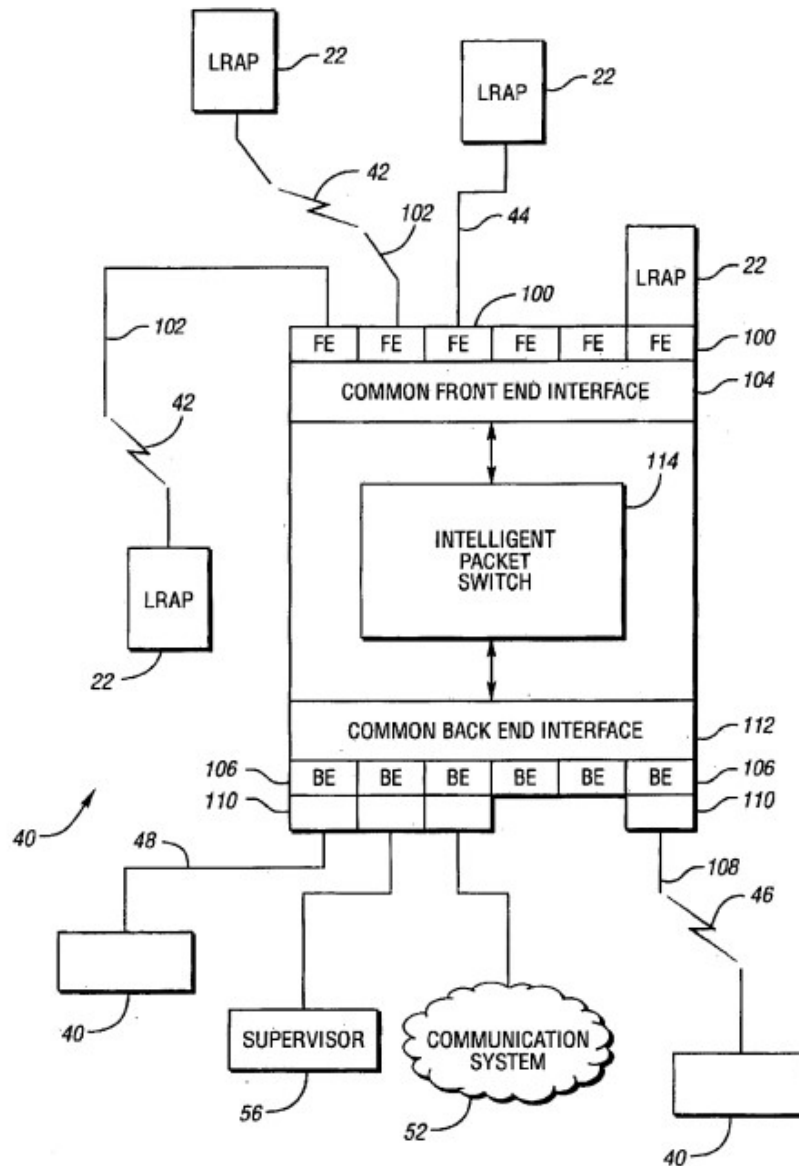


Fig. 2

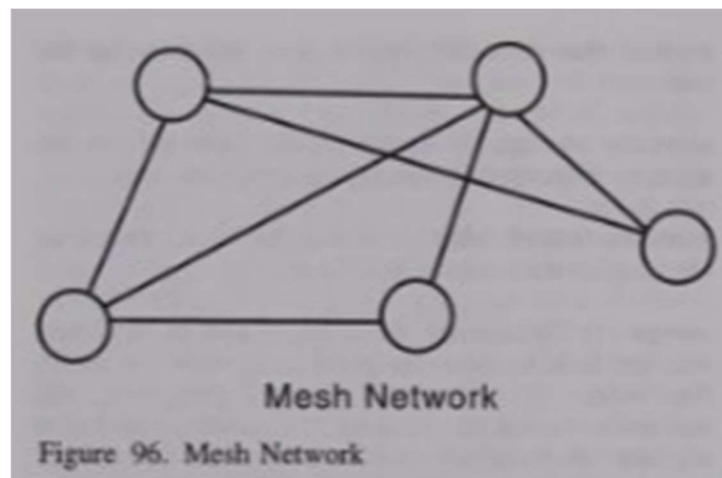
(EX1005, Figure 2.) As shown in Fig. 2 (above), each connection from a distribution point 40 to an access point 22 is point-to-point—rather than point-to-multipoint—because each connection to a distinct access point 22 has its own front end (“FE”) interface 100. (*Id.*; EX2007, ¶94.) Hohnstein never refers to connections between a distribution point 40 and an access point 22 as a WAN or

WWAN or wide area network, and in fact does not use those terms at all. (*See generally*, EX1005; EX2007, ¶95; *see* EX2014, 34:7–35:5 (Petitioner’s expert testifying to having no recollection of Hohnstein indicating that the connections between distribution point 40’s front-end blocks and an access point 22 utilizes a wide-area communication protocol).) Indeed, even if a POSA were to assume that Hohnstein’s connections from a distribution point 40 to an access point 22 are a WAN (they are not), Hohnstein would still describe them as individual, point-to-point links using different protocols. (EX2007, ¶95; *see* EX2014, 28:9–32:14 (Petitioner’s expert testifying that distribution point 40’s back-end blocks are “likely to utilize different protocols”).) This conflicts with the ’794 Patent’s Challenged Claims, wherein a base station communicates with a plurality of wireless communication devices according to a *single WWAN protocol* just as a cellular base station would. (EX2007, ¶95.)

Not only do Hohnstein and the ’794 patent differ in terms of the way in which access points are connected, but the references also differ in how the distribution points (i.e. Petitioner’s alleged “base stations”) are interconnected. Specifically, in Hohnstein, each distribution point 40 connects directly with one or more other distribution points 40, with each direct connection made via point-to-point wired connections 48 or point-to-point radio links 46. (EX2007, ¶96.) While these interconnections may be influenced by geographical location, there are no

predefined architectural rules for how to interconnect them, and numerous combinations are possible. (*Id.*)

Such a network is referred to as a “mesh network.” (*See* Ex. 2013, 3; EX2007, ¶96.) Mesh networks are single-layer, modular networks that lack the architectural designs of cellular networks utilizing base transceiver stations, as shown in the Figure below from the IBM Dictionary of Computing:



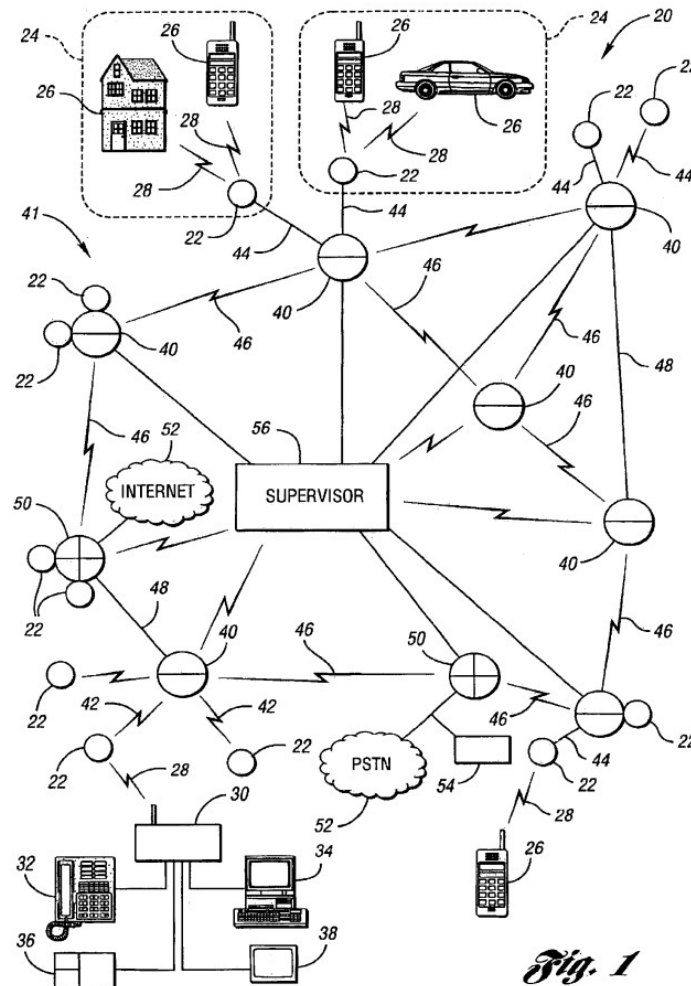
(EX1013, 4; EX2007, ¶96.) Each component is an ATM/IP switch, with operation differing only based on what role each individual switch plays (at that time) within the overall mesh network:

Distribution points 40 are always peers at the IP and ATM layer, while access points 22 are clients of distribution points 40. As such, *each ATM/IP switch 300 functions as a server when operating as distribution point 40 and as a client when operating as access point 22.*

(EX1005, 11:15–20; EX2007, ¶96.)

Mesh networks such as Hohnstein's have a different architectural design than cellular networks utilizing base transceiver stations, such as in Figures 2 and 3 of the '794 patent. (EX1001, Figures 2–3; EX2007, ¶¶97.) In the '794 patent, each remote modem has a single backhaul connection to a core network, rather than all the remote modems being connected in a mesh network. (*Id.*) This difference provides further evidence that Hohnstein's invention does not encompass expanding cellular WWAN using WLAN hot spots, and therefore is distinct from the '794 patent. (EX2007, ¶¶97.)

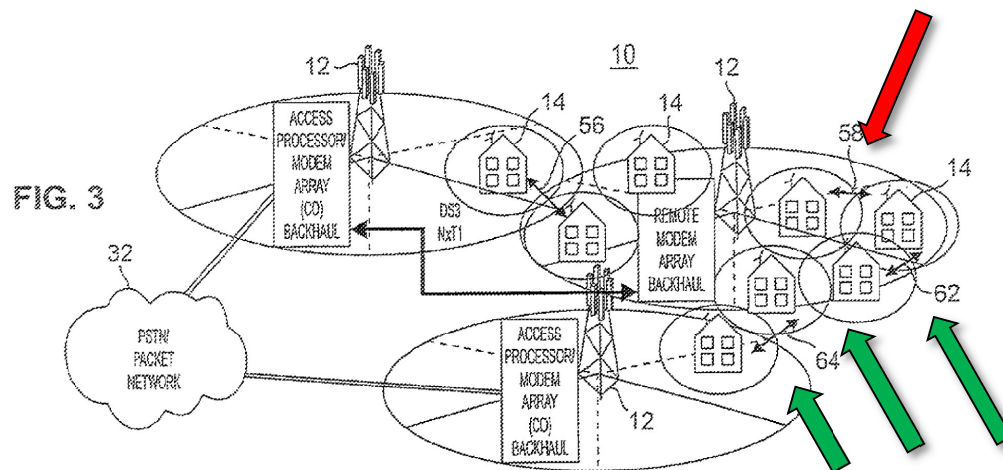
A POSA would understand that the mesh network in Hohnstein is quite different than the '794 patent because Hohnstein utilizes a single wireless technology across the network and transmits the signal from base stations 40 to access points 22, which provide a network for multiple devices in the coverage area of the access points 22, as shown below. (EX2007, ¶¶92, 97.)



(EX1005, Fig. 1.)

By contrast, the '794 patent uses two different wireless technologies: (1) a “cellular backhaul” wireless signal that is transmitted in a WAN by a base station and operates according to a WAN protocol, and (2) a Wi-Fi wireless signal that is transmitted in a LAN by a wireless communication device, according to a LAN protocol. (EX2007, ¶¶42, 45–46.) Thus, the '794 patent provides cellular WAN (shown by red arrow below) and LAN coverage areas (Wi-Fi LAN) (shown by

green arrows below). (*Id.*) The WAN signal thus connects devices in the Wi-Fi LAN networks to a wider network (*e.g.*, a cellular broadband network). (*Id.*)



(EX1001, Fig. 3.) Therefore, Hohnstein provides for a one-layer “mesh” network, while the ’794 patent claims two distinct WAN and LAN networks. (EX2007, ¶¶42, 45–46, 96–97.). Petitioner contorts Hohnstein in an effort to morph a common “mesh” network into two different WAN and LAN networks.

In fact, Petitioner still alleges that Hohnstein teaches a WWAN protocol, arguing that “[t]he communications between the distribution point 40 and the multiple access points 22 via wireless link 42 involve a wide area communication protocol, as Hohnstein describes such communications as “backhaul communication” that includes communication over the Internet, which involves wide area networks and communication protocols.” (Petition, 51 (citing EX1005, 16:15–21, 8:49–55).) This is a significant misrepresentation of Hohnstein’s

disclosure. (EX2007, ¶107.) For clarity, the portions of Hohnstein upon which Petitioner relies are set forth in full below:

The frequencies and formats for transmission are based on regulatory requirements, frequency availability, data rates provided, noise, and other disturbances. Typical backhaul frequencies include 6, 11, 18 and 23 GHz licensed bands for DS3/OCS transmission and 5.8 and 24 GHz for unlicensed ATM-25 transmission.

(EX1005, 16:15–21.)

Distribution point 40 also includes back end communication interfaces 106 for connecting distribution point 40 with additional distribution points 40, with supervisor 56, and, if distribution point 40 is a gateway 50, with telecommunication systems, private network systems, video distribution systems, the Internet, or the like. This may be typically referred to as backhaul communication.

(EX1005, 8:49–55.)

A POSA would understand that the first passage Petitioner relies upon emphasizes that Hohnstein's links are point-to-point microwave links at 5.8, 6, 11, 18 and 23 and 24 GHz, as discussed previously. (EX2007, ¶107.) A POSA would further understand that the second passage discloses that distribution points 40 can ultimately connect with (or be) a gateway 50 and then connect to the Internet. (EX2007, ¶107; EX1005, 8:49–55, Figure 2 (showing a gateway 50 and the Internet 52 on the left side in the middle).) However, this is much different than stating that wireless links 42 themselves are part of the Internet as Petitioner

alleges. (EX2007, ¶107.) They are not. (*Id.*) Rather, wireless links 42 are part of Hohnstein’s private network. (*Id.*) As such, even if communications over the Internet may involve wide area networks and communication protocols, this says nothing about Hohnstein’s wireless links 42 “involv[ing] a wide area communication protocol” as Petitioner alleges. (*Id.*)

For these reasons, Hohnstein does not describe its system as a WAN or WWAN, and so—like Palmer—does not disclose “wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol” as the Challenged Claims recite. (EX2007, ¶108.) Since neither Hohnstein nor Palmer discloses this claim element, neither does the combination of the two references. (EX2007, ¶¶75, 108.) Thus, Petitioner’s Ground 2 challenge must fail.

2. **[1.b] Palmer + Honstein does not disclose “a second wireless transceiver coupled to the first wireless transceiver...wherein the second wireless transceiver communicates with the first mobile station and the second mobile station according to a local area wireless communication protocol” as the Challenged Claims recite.**

With respect to claim element [1.b], Petitioner alleges that Hohnstein’s “wireless communication between access system 564 and subscriber unit 26 via wireless link 28 uses a local area wireless communication protocol...” (Petition,

55.) This is incorrect. Hohnstein describes wireless links 28 between subscriber units 26 and access points 22 in its local networks as follows:

Wireless link **28** may be any form of electromagnetic signaling not confined to a wire or cable, including energy radiated by antenna as well as visible and invisible light. As will be appreciated by one of ordinary skill in the art, wireless link **28** may be implemented by any access technology, including CDMA, TDMA, FDMA, OFDM, analog, and the like. Modulation techniques that may be used with the present invention include FSK, BPSK, QPSK, m-ary QAM, FM, AM, and the like. Further, the invention does not depend on modulation frequency or on the use of FDD or TDD. In a preferred embodiment, the access technology, frequency, and modulation method for establishing wireless link **28** are based, in part, on local geography, local regulations, noise and distortion sources, other operating wireless systems, cost, or any other suitable parameter. Subscriber unit **26** and access point **22** may establish wireless link **28** using a plurality of combinations of access technology, frequency, and modulation techniques.

(EX1005, 4:29–46; EX2007, ¶109.)

Based on this disclosure, a POSA would understand that Hohnstein does not teach that the wireless links between an access point 22 and two or more subscriber units 26 communicate according to a local area wireless communication protocol, which requires use of a single WLAN protocol. (EX2007, ¶110.) Instead, Hohnstein’s links use “a plurality of combinations of access technology” and “any form of electromagnetic signaling.” (EX1005, 4:29–46; EX2007, ¶110.) This is in

contrast to the single local area wireless communication protocol described and claimed in the '794 patent. (EX1001, Figures 2–3, 3:41–54; EX2007, ¶110.) Therefore, Hohnstein—like Palmer—does not teach claim element [1.b], and so the combination of the two references also does not disclose this claim element. (EX2007, ¶81, 110.) For this additional reason, Petitioner’s Ground 2 challenge must fail.

3. **[1.c] Palmer + Honstein does not disclose “wherein the first wireless transceiver receive from the base station a first downlink signal intended for the first mobile station and provides the first downlink signal to the second wireless transceiver and wherein the second wireless transceiver receives the first downlink signal and re-transmits the first downlink signal to the first mobile station as a second downlink signal according to the local area wireless communication protocol” as the Challenged Claims recite.**

As described in Sections II.C.2. and IV.B.1.–IV.B.2. above, Hohnstein does not disclose a first wireless transceiver and a second wireless transceiver that disclose claim element [1.c], as Petitioner alleges. (EX2007, ¶111.) Petitioner does not allege that Palmer adds anything over Hohnstein to elements [1.a–c.]. (*Id.*) Therefore, Hohnstein in combination with Palmer also does not disclose the '794 patent’s claim element [1.c]. (*Id.*) For this additional reason, Petitioner’s Ground 2 challenge must fail.

4. **[1.d] Palmer + Hohnstein does not disclose “wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, routes information to the first mobile station and the second mobile station, respectively,” as the Challenged Claims recite.**

As discussed with respect to Palmer, before the district court, Petitioner has taken the position that no WLAN transceiver can *ever* “route” information as the Challenged Claims recite, under the district court’s construction of the term. (*See* Section IV.A.4.) For this reason, just as with Palmer, Petitioner cannot argue that Hohnstein, or a combination of Palmer and Hohnstein, “routes information” as the Challenged Claims recite. (EX2007, ¶113.)

Contrary to its district court litigation position, Petitioner alleges that Hohnstein—and if not Hohnstein, then Palmer—discloses claim element [1.d]. (Petition, 58–60.) Specifically, for the “routes information” element, Petitioner alleges that “Hohnstein also describes the access points 22 routing information to first and second subscriber units 26.” (Petition, 59.) In support, Petitioner cites Hohnstein at 16:46–54, 2:50–54, 2:60–64, 3:4–6, 16:12–15 and 13:25–39. (*Id.*) However, none of these passages disclose “routing information to the first mobile station and the second mobile station” as the Challenged Claims recite. In fact, the first cited passage, Hohnstein at 16:46–54, describes Figure 13, which depicts “a combined access point 22 and distribution point 40.” (*See* EX1005, 16:37, 46–54).

In that case, the described “rout[ing]” is done by the distribution point 40 portion—not by access points 22 as Petitioner alleges. (EX1005, 16:33–54.) A POSA would recognize that Hohnstein does not disclose a “second transceiver” “routing information to the first mobile station and the second mobile station” as the Challenged Claims recite, particularly under the district court’s construction of routing information. (EX2007, ¶114; *see generally* EX1005.)

Petitioner’s arguments that Hohnstein discloses the “monitoring” portion of claim element [1.d] also fail. (EX2007, ¶115.) The Petition alleges that “Hohnstein describes the access system 564 in [sic] an access point 22 monitoring signal characteristics of downlink signals of subscriber units, since Hohnstein teaches that ‘a quality error bit rate is established for each subscriber unit 26’ which ‘reflect[s] *changing conditions* such as *noise*, demand, connectivity, or any other suitable parameter.’” (Petition, 58 (citing EX1005, 5:1–21) (emphasis in Petition).)

To the contrary, Petitioner’s citation to Hohnstein does not teach an access point monitoring signal characteristics. (EX2007, ¶116.) Instead, this disclosure teaches only that an access point transmits a signaling channel that subscriber stations monitor. (EX1005, 5:22–24; EX2007, ¶116.) Otherwise, according to Petitioner’s cited passage of Hohnstein, the subscriber stations and the whole communication system 20 monitor a quality error bit rate of the whole system so that “[a]pplications providing services to subscriber unit 26 may adjust these

services based on the quality error bit rate.” (EX1005, 5:1–29; EX2007, ¶116.)

Critically, there is no teaching in Petitioner’s cited passages or in Hohnstein generally that an access point—what Petitioner identifies as the claimed “second transceiver” in Hohnstein—“monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, and based on the first signal characteristics and the second characteristics, [directs information through a specified path] to the first mobile station and the second mobile station, respectively,” as the Challenge Claims—as well as the district court’s claim construction—require. (EX2007, ¶117.) Indeed, Petitioner does not even allege that this is the case, instead alleging that Hohnstein’s subscriber unit 26—rather than its access point 22—performs the alleged “monitoring.” (Petition, 58–59.)

For each of these reasons, Hohnstein fails to disclose claim element [1.d]. (EX2007, ¶118.) Further, for the reasons discussed in Section IV.A.4., above, Palmer also fails to disclose this claim element. (*Id.*) Therefore, Hohnstein in combination with Palmer also does not disclose the ’794 patent’s claim element [1.d]. (*Id.*) For this additional reason, Petitioner’s Ground 2 challenge must fail.

5. Palmer + Honstein does not disclose or obviate Challenged Claims 2–6.

Because Challenged Claims 2–5 depend from claim 1, Petitioner’s Ground 2 challenge to claims 2–5 fails for the same reasons as discussed for claim 1, above.

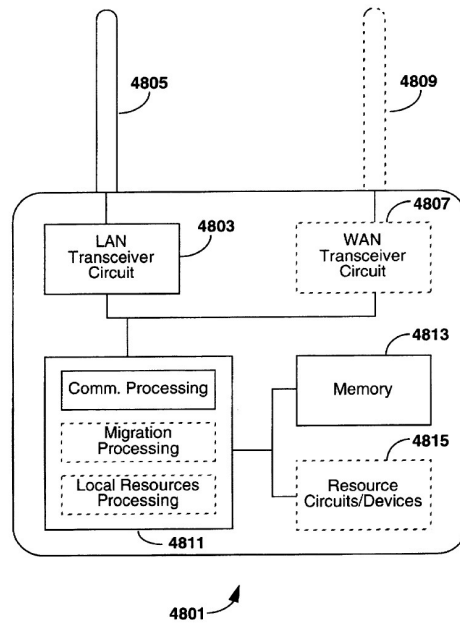
(EX2007, ¶¶119–120.) Claim 6 is a method claim version of apparatus claim 1.

(EX2007, ¶119.) Therefore, Petitioner’s Ground 2 challenge to claim 6 fails for the same reasons as discussed for claim 1, above. (EX2007, ¶120.)

C. Ground 3: Palmer + Mahany Fails to Disclose or Obviate the Challenged Claims.

In Ground 3, Petitioner asserts Palmer in combination with Mahany to address a number of deficiencies in Palmer. Mahany combined with Palmer still does not disclose each element of the Challenged Claims. (EX2007, ¶130.)

First, Petitioner argues that, “to the extent Patent Owner alleges that claims 1 and/or 6 require the claimed device be integrated and that Palmer does not disclose such integration, Mahany discloses a device with integrated first and second wireless transceivers.” (Petition, 70.) In support, Petitioner points to Mahany’s access device 4801 (shown in Figure 48, below) as an integrated device with a LAN Transceiver Circuit 4805 and a WAN Transceiver Circuit 4807. (Petition, 70–71, 73–74; EX1006, Figure 48.) It is notable that the WAN Transceiver is optional (given its dotted box in Figure 48) and, given the extent to which Mahany disparages WANs—as discussed in Section II.C.3.—to be used as a last resort. (EX2007, ¶124; *see* EX1006, 3:9–20, 3:40–43.)



(EX1006, Figure 48 (annotated).)

Second, Petitioner argues that, “[t]o the extent Patent Owner disagrees that Palmer teaches a “base station” (limitations [1.a], [6.a]), Mahany discloses a wireless base station topology for a WWAN.” (Petition, 71.)

As discussed in Section II.C.3. above, Mahany’s invention is a network of hierarchical LANs, and an access device is the “Base Station” in Mahany’s Figure 1b below. (EX2007, ¶125.)

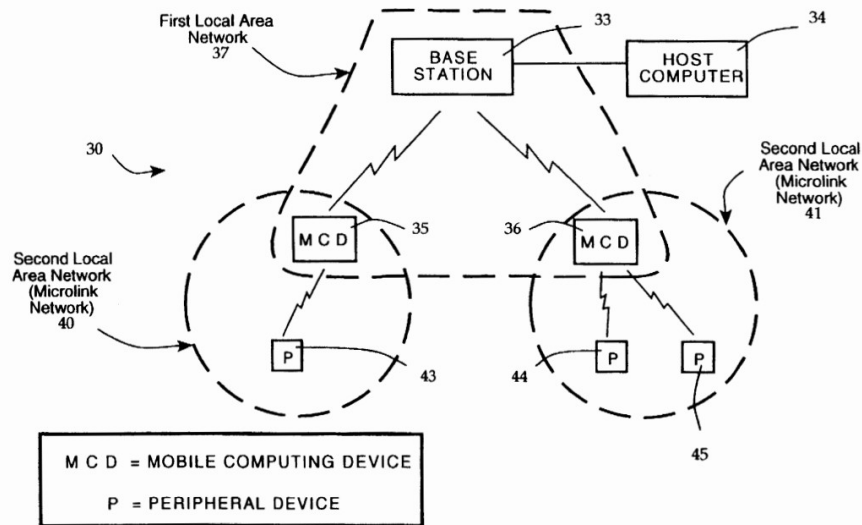


Figure 1b

(EX1006, Figure 1b, 9:7–16 (“Herein, **base stations** which participate in routing and relaying data throughout the communication network are referred to as ‘**access points**.’ If they also participate in the storage or migration of data and program code or in local processing, the base stations are referred to herein as ‘**access servers**. As will become apparent below, an access point may be modified with additional circuitry and/or programming resources to become an access server. Additionally, **access servers** and **access points** are both referred to herein as ‘**access devices**.’”).)

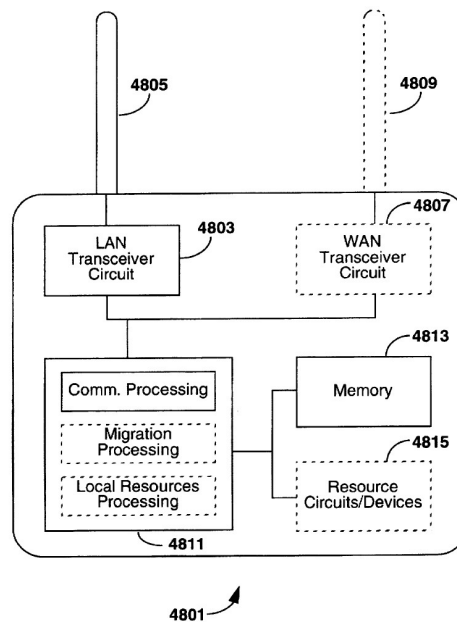
To the extent Mahany’s base station (which according to Petitioners would be the claimed “wireless communication device” in Challenged Claim 1 rather than the claimed “base station”) has a WWAN transceiver, Mahany does not describe how it would communication with some other base station, wherein that base station communicates with the first wireless transceiver and a plurality of other

wireless communication devices according to a wide area wireless communication protocol. (EX2007, ¶126.) Furthermore, as explained in Section IV.A.2. above, Palmer’s invention *requires* there to be a LAN, and for the remote antenna 34 to be a distinct device from each access point 40. (EX2007, ¶126.) Therefore, there is no reason a POSITA would use Mahany to integrate Palmer’s distinct remote antenna 34 and access point 40. (*Id.*) See *Plas-Pak Indus., Inc. v. Sulzer Mixpac AG*, 600 F. App’x 755, 758 (Fed. Cir. 2015) (affirming the Board’s finding that an invention was nonobvious where a person of ordinary skill would not have been motivated to pursue the combination because it would “change the basic principles under which the prior art was designed to operate, or...render the prior art inoperable for its intended purpose.”) (citations and quotations omitted); see also *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

Additionally, regarding Petitioner’s assertion that, “[t]o the extent Patent Owner disagrees that Palmer teaches a “base station” (limitations [1.a], [6.a]), Mahany discloses a wireless base station topology for a WWAN” (Petition, 71), the base station in Mahany and its supposed WLAN transceiver would not be the claimed base station, such that there would not be any base station in Mahany. (EX2007, ¶127.)

Third, Petitioner argues:

To the extent Patent Owner disagrees that the first wireless transceiver's communications in Palmer involve a wide area wireless communication protocol (limitations [1.a], [6.a]) and/or the second wireless transceiver's communications is deemed not to involve a local area wireless communication protocol (limitations [1.b], [6.b]), Mahany discloses and/or suggests such distinctive protocols, as Mahany describes transceiver circuitry 4803 being a wireless “LAN” transceiver circuit while transceiver circuit 4807 being a wireless “WAN” transceiver circuit:



(Petition, 71–72 (citing EX1006, Figure 48 (annotated)).)

Petitioner's assertion that Mahany discloses distinctive WLAN and WWAN protocols simply because Mahany describes transceiver circuitry 4803 being a wireless “LAN” transceiver circuit while transceiver circuit 4807 being a wireless

“WAN” transceiver circuit—is incorrect. (EX2007, ¶128.) Specifically, the presence of a WLAN transceiver and a WWAN transceiver in one device does not teach the Challenged Claim elements “wherein the base station communicates with the first wireless transceiver and a plurality of other wireless communication devices according to a wide area wireless communication protocol” and “wherein the second wireless transceiver communicates with the first mobile station and the second mobile station according to a local area wireless communication protocol.” (*Id.*) Further, Mahany does not disclose these elements elsewhere. (EX2007, ¶*Id.*)

Notably, Petitioner does not attempt to combine Mahany with Palmer for claim element [1.d], which as discussed above, is not disclosed in either Palmer or Hohnstein. (Petition, 70–73; EX2007, ¶129.)

For the reasons above, Mahany does not add any alleged teachings or features to Palmer, and the combination does not teach disclose any of the Challenged Claims. (EX2007, ¶130.)

D. Ground 4: Palmer + Agrawal Fails to Disclose or Obviate the Challenged Claims.

In Ground 4, Petitioner asserts Palmer in combination with Agrawal in an attempt to remedy Palmer’s deficient disclosure with respect to claim element [1.d]. (Petition, 78.) Specifically, Petitioner argues that, “to the extent Patent Owner alleges Palmer does not describe its monitoring as being the second transceiver monitoring first signal characteristics of the second downlink signal of

the first mobile station and monitoring second signal characteristics of the second mobile station, Agrawal describes these features.” (Petition, 78.) Not so.

As discussed in Section II.C.4. above, Agrawal discloses power and FEC control in a mobile radio system, i.e., a cellular system. (EX2007, ¶134.) A cellular system is not a wireless LAN, and Agrawal’s techniques of power and FEC control in a cellular system have nothing to do with a WLAN or with monitoring signal characteristics of a downlink signal between a WLAN access point and a WLAN mobile device. (*Id.*) As such, Agrawal adds nothing to Palmer, and a POSA would not have been motivated to combine them. (*Id.*)

The fact that a “receiver” in Agrawal—which is not part of a WLAN—monitors some signal characteristics, does not come close to meeting the detailed limitations of claim element [1.d]. (EX2007, ¶132.) Therefore, even if a POSA did combine Agrawal’s “receiver” with Palmer, it would not disclose claim element [1.d]. (*Id.*)

Petitioner does not even allege that Agrawal monitors signal characteristics, and “based” on monitoring signal characteristics routes information accordingly. The specific claim limitation provides:

wherein the second transceiver monitors first signal characteristics of the second downlink signal of the first mobile station and monitors second signal characteristics of the second mobile station, **and based on the first signal characteristics and the second characteristics,**

routes information to the first mobile station and the second mobile station, respectively.

(EX1001, 10:38–44.) Indeed, the purpose of the claimed second transceiver monitoring the signal characteristics is to “route information” and without such a disclosure, Agrawal falls short. (EX2007, ¶135.) Because Petitioner does not allege that Agrawal provides such a teaching, combining with Palmer would not meet the claim and Ground 4 fails. Further, the PTAB cannot fill in the blanks in the legal framework of the Petitioner’s faulty argument. *In re Magnum Oil Tools Int’l Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“[I]t is still a system that is predicated on a petition followed by a trial in which the petitioner bears the burden of proof. Given that framework, we find no support for the PTO’s position that the Board is free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR.”).

For the reasons above, Agrawal does not add any alleged teachings or features to Palmer, and the combination does not teach disclose any of the Challenged Claims. (EX2007, ¶136.)

E. Ground 5: Palmer + Agrawal + Mahany (Ground 5) Fails to Disclose or Obviate Challenged Claim 5.

In Ground 5, Petitioner asserts Palmer in combination with Agrawal and Mahany. However, for the reasons discussed for Grounds 1, 3, and 4, this combination also fails to teach or disclose Challenged Claim 5, which depends

from Challenged Claim 1. (EX2007, ¶137.)

F. Ground 6: Hohnstein + Agrawal Fails to Disclose or Obviate the Challenged Claims.

In Ground 6, Petitioner combines Hohnstein with Agrawal. (Petition, 80–82.) Specifically, Petitioner purports to replace Palmer for teachings “pertaining to second transceiver monitoring first signal characteristics of the second downlink signal of the first mobile station” in claim element [1.d]. (Petition, 80.) As in Ground 4, Petitioner does not attempt to combine Agrawal with Hohnstein for the “routes information” element of claim element [1.d], which as discussed above, is not disclosed in Hohnstein. (Petition, 80; EX2007, ¶139.) Once again, Petitioner does not even allege that Agrawal monitors signal characteristics, and “based” on monitoring signal characteristics routes information accordingly. (*See* Petition, 80–82.) As discussed above in Section IV.D., because Petitioner does not allege that Agrawal provides such a teaching, combining with Hohnstein would not meet the claim and Ground 6 fails. *See In re Magnum*, 829 F.3d 1364 at 1380.

Additionally, as discussed in Sections II.C.4. and IV.D. above, Agrawal discloses power and FEC control in a mobile radio system, i.e., a cellular system. (EX2007, ¶140.) A cellular system is not a wireless LAN, and Agrawal’s techniques of power and FEC control in a cellular system have nothing to do with a WLAN or with monitoring signal characteristics of a downlink signal between a WLAN access point and a WLAN mobile device. (EX2007, ¶140.) As such,

Agrawal adds nothing to Hohnstein, and a POSA would not have been motivated to combine them. (*Id.*)

V. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests the Board confirm that the Challenged Claims of the '794 patent are patentable.

Dated: May 1, 2024

Respectfully Submitted,

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CERTIFICATE OF WORD COUNT

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the Microsoft Office word count for the foregoing Patent Owner's Response under 37 C.F.R. § 42.120, excluding the table of contents, table of authorities, claim listing, certificate of word count, and certificate of service, totals 13,507 words, which is less than the 14,000 words allowed under 37 C.F.R. § 42.24(b)(2).

Dated: May 1, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Patent Owner's Response was served on May 1, 2024, by delivering a copy via electronic mail to the attorneys of record for the Petitioner as follows:

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