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Paper 42
Date: October 8, 2014

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LEVEL 3 COMMUNICATIONS, LLC,
Petitioner,

v.

AIP ACQUISITION LLC,
Patent Owner.

Case IPR2013-00296
Patent 7,724,879 B2

Before JAMESON LEE, HOWARD B. BLANKENSHIP, and JUSTIN BUSCH, *Administrative Patent Judges.*

BUSCH, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. BACKGROUND

Level 3 Communications, LLC ("Petitioner") filed a Petition[1] (Paper 6, "Pet.") requesting *inter partes* review of claims 1–15 (all the claims) of U.S. Patent No. 7,724,879 B2 ("the '879 patent") under 35 U.S.C. §§ 311–319. On October 31, 2013, the Board instituted an *inter partes* review of claims 1–15 ("the challenged claims") on four asserted grounds of unpatentability ("Dec. on Inst."). Paper 14. Subsequent to institution, AIP Acquisition LLC ("Patent Owner") filed a Patent Owner Response ("PO Resp."). Paper 20. Petitioner filed a Reply ("Pet. Reply") to the Patent Owner Response. Paper 30. Oral hearing was held on July 15, 2014.[2]

The Board has jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable.

A. The '879 Patent (Ex. 1001)

The '879 patent relates to methods for allowing "communication between otherwise incompatible communication networks in a manner that is transparent to the calling party." Ex. 1001, 1:61–63. For example, claimed methods allow the Internet, or another data network, to function like a telecommunications network. *Id.* at 6:36–38. Calling parties may dial remote locations for the price of a local access and service fee to have voice conversations with called parties in those locations and to avoid using long distance carriers. *Id.* at 6:38–42. In order to make such calls, a local system

[1] We refer to the corrected Petition filed May 29, 2013.
[2] The record includes a transcript of the oral hearing ("Hr'g Tr."). Paper 41.

may be dialed via computer access or a regular telephone, which prompts the calling party for the called party's telephone number or other identification. *Id.* at 6:42–44. The calling party then is connected to the called party over the Internet or another data network, such as by connecting the parties via a node through a local call or through other networks. *Id.* at 6:44–47. For example, a calling party may access a node that converts the telephone transmission (e.g., the voice transmission) into data supported by the network chosen by the node. *Id.* at 6:47–49. In this example, a network may connect to another node proximate to the called party that then converts the data transmission back into a voice communication and converts the voice communication into a local call to the called party with the called party node operated by an independent service provider located elsewhere, such as in another country. *Id.* at 6:49–54.

A method, as recited in the challenged claims, is illustrated by the conceptual block diagram in Figure 9, reproduced below:

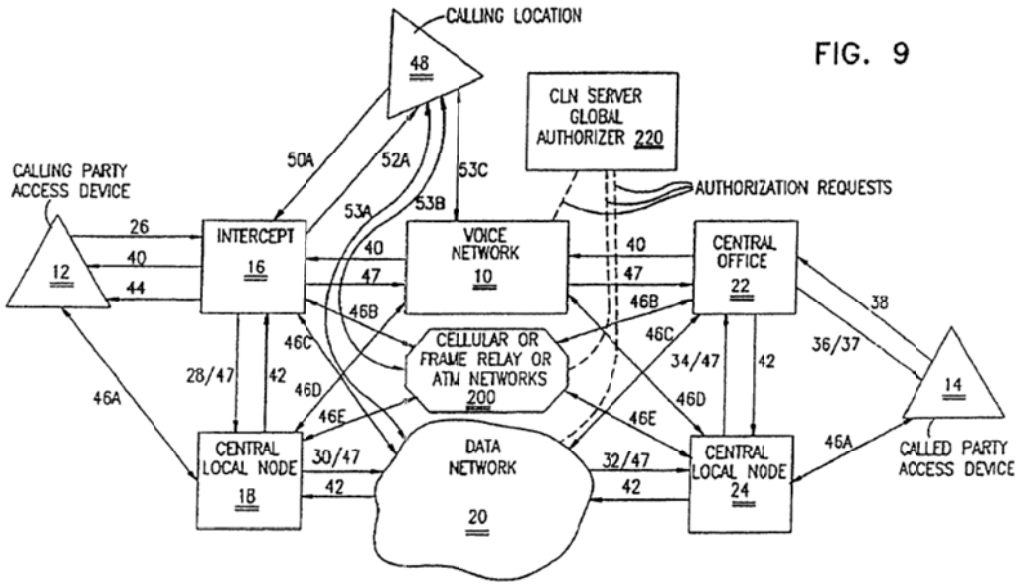

Figure 9 provides an overview of the transmission flow between a calling party and a called party. *See id.* at 6:36–56. In Figure 9 of the '879 patent, a

conceptual block diagram depicts the principles of operation of the method, as recited in independent claim 1, for transmitting voice communications between a calling party and a called party over a data network or another network. *Id.* at 4:3–4, 14:27–45. The calling party at calling location 48 transmits a call to calling party access device 12 via intercept 16 over link 50A. *Id.* at 14:62–15:3. Intercept 16 may be part of central local node 18. *Id.*at 15:11–12. Local node 18 receives transmissions from access device 12, converts those transmissions from a first format (e.g., a telecommunication protocol) to "an internet protocol" for transmission over data network 20, and sends the converted transmissions over data network 20 in order to establish and transmit voice communication for a phone call with called party access device 14. *Id.* at Fig. 9.

As an alternative to communicating through data network 20, additional two-way direct link connections 46A–E are depicted. *Id.* at 14:29–36. Through these connections, calling party access device 12 may route communications to called party access device 14 via either communications network 10[3] or another network 200, such as a cellular, Asynchronous Transfer Mode (ATM), or frame relay network. *Id.*; *see also id*. at 7:34–39. Access device 14 may receive the voice communication via a central local node 24 and/or a central office 22. *Id.* at 15:4–8. Central local node 24 and central office 22 may be separate components. *Id.* at 15:12–14. The transmissions are converted from the internet protocol to another format suitable for reception by access device 14, such as the telecommunications

[3] In Figure 9 of Ex. 1001, communications network 10 is identified as "voice network 10."

protocol from which the transmissions were originally converted. *See id.* at 4:34–42.

B. Illustrative Claim

Independent claim 1, which is the only independent claim and is illustrative of the subject matter, is reproduced below:

> 1. A method for communication between two access devices via one or more networks, comprising the steps:
>
> receiving a transmission in a first format through a first communication network from a first access device, the first format comprising a telecommunication protocol for establishing and transmitting voice communication for a phone call in one of a digital telephone network, an analog telephone network, and a cellular network;
>
> performing a first conversion converting the transmission from the first format to a second format, the second format being an internet protocol;
>
> sending the converted transmission through a second communication network, the second communication network being a data network, for reception by a second access device; and
>
> performing a second conversion further converting the converted transmission from the second format to a further format suitable for the second access device, wherein the first access device and the second access device comprise telecommunication nodes, and said further format comprises said first format or another telecommunication protocol.

C. Related Proceedings

On May 17, 2012, Patent Owner filed an action against Petitioner alleging infringement of the ’879 patent, *AIP Acquisition LLC v. Level 3 Communications, LLC*, Civ. Action No. 12-617 (D. Del.). Pet. 1. The ’879 patent is also involved in the following district court actions: *AIP*

Acquisition LLC v. iBasis, Inc., Civ. Action No. 12-616 (D. Del.); *AIP Acquisition LLC v. Time Warner Cable Inc.*, Civ. Action No. 12-01692 (D. Del.); *AIP Acquisition LLC v. Cox Communications Inc.*, Civ. Action No. 12-01691 (D. Del.); *AIP Acquisition LLC v. Comcast Corp.*, Civ. Action No. 12-01690 (D. Del.); *AIP Acquisition LLC v. Cablevision Systems Corp.*, Civ. Action No. 12-01688 (D. Del.); and *AIP Acquisition LLC v. Charter Communications Inc.*, Civ. Action No. 12-01689 (D. Del.). *See* Pet. 1–2. The '879 patent is also involved in *Cisco Sys., Inc. v. AIP Acquisition LLC*, IPR2014-00247 (PTAB), a currently-pending *inter partes* review.

D. Asserted Grounds of Unpatentability

The Board instituted *inter partes* review on the following asserted grounds of unpatentability under 35 U.S.C. § 103(a) (Dec. on Inst. 33):

References	Basis	Challenged Claim(s)
Kammerl[4] and Iwami[5]	§ 103(a)	1–7 and 15
Kammerl, Iwami, and Kobayashi[6]	§ 103(a)	8, 9, and 11–13
Kammerl, Iwami, Kobayashi, and Chau[7]	§ 103(a)	10
Kammerl, Iwami, and Gordon[8]	§ 103(a)	14

[4] US 5,051,983, Sept. 24, 1991 (Ex. 1013) ("Kammerl").
[5] US 5,604,737, Feb. 18, 1997 (filed Dec. 13, 1994) (Ex. 1006) ("Iwami").
[6] US 5,337,352, Aug. 9, 1994 (Ex. 1007) ("Kobayashi").
[7] US 5,187,710, Feb. 16, 1993 (Ex. 1008) ("Chau").
[8] US 5,608,786, Mar. 4, 1997 (filed Feb. 13, 1995) (Ex. 1005) ("Gordon").

II. ANALYSIS

A. Claim Construction

No terms need to be construed for purposes of this decision and both parties state that claim construction does not affect the issues in this case. Hr'g Tr. 5:6, 28:10–11, 28:19–29:13. Therefore, we do not explicitly construe any term.

B. Submitted Evidence

1. Kammerl (Ex. 1013)

Kammerl is directed to "a method and a circuit for speech transmission in a broad-band communications network." Ex. 1013, 1:14–16. Kammerl discusses the fact that a broad-band communications network that transmits signals in packets was known and "[t]ransmission of speech signals following dial connections between subscriber's sets is provided in this known system." *Id.* at 1:18–26. Kammerl further discloses that the packet switching network may serve as a transit network when connected between two public switched telephone networks (PSTNs) via interworking units. *Id.* at 5:57–61.

Kammerl explains that lag times occurring in speech transmission (due to packing and depacking times, processing times, and waiting times) over fixed length packet networks were known to negatively affect the quality of speech signal transmissions. *Id.* at 1:29–37. Kammerl further identifies a problem in hybrid networks (those networks that "include analog/digital telephone switching network[s] in addition to broad-band packet switching networks") occurring in a transfer between the networks. *Id.* at 1:37–43. In particular, Kammerl explains that "the transit time of echo signals caused by the hybrid sets can assume a size such that the echo

signals are perceived as interference" due to the "lag times in packet switching networks." *Id.* at 1:43–48.

Kammerl acknowledges that one prior art solution to suppressing the echo signals was to include echo suppressors or echo compensators on the transmission lines, but that such circuitry was expensive and, therefore, undesirable in some instances. *Id.* at 1:49–52. Kammerl also recognizes that "there have already been proposals for reducing the lag times in broad-band packet switching networks by filling packets of a fixed length only partially with speech signals in speech signal transmission." *Id.* at 1:53–56.

Kammerl attempts to overcome the identified problems by reducing lag times. *Id.* at 1:57–60. Kammerl's specific invention is directed to a method for reducing the degree of packet filling in order to reduce lag times for telephone connections over the packet exchange network, "whereas the full packet capacity can be utilized for communication signals to be transmitted following connections of other services," reducing or eliminating the need for the echo suppression systems. *Id.* at 1:64–2:10. Kammerl accomplishes this alteration by configuring the network transfer units to insert control signals into signaling packets when establishing a connection between a PSTN and a packet network to indicate that packet filling should be reduced for transmission of speech signal packets in the hybrid connection. *Id.* at 2:11–3:5. Kammerl purports to provide a solution that adds "[o]nly a slight additional control expense" and that requires minimal transmissions of a control signal to adjust packet filling because "only one network transfer unit is included in the control of the transmission of speech signal packets even" in communications networks "in which a packet switching system is inserted as a transit switching system over network

transfer units between two telephone exchanges." *Id.* at 2:11, 2:51–65; *see also id.* at 5:57–6:3 (explaining that only the interworking units that receive packets from the packet switching network deliver control signals that may adjust packet filling).

2. Iwami (Ex. 1006)

Iwami is directed to a method and system for establishing a connection for voice communication between a terminal connected to a data network and a terminal connected to a PSTN and allowing various communication functions between the two terminals. Ex. 1006, Abstract, 1:55–2:17. Iwami discloses that the data network may support various protocols, including Internet Protocol (IP), such that Iwami may send packets over its network using UDP/IP and TCP/IP. *Id.* at 17:44–58.

C. Petitioner's Objections to Alleged New Patent Owner Arguments at Oral Hearing

Petitioner objects to various arguments made by Patent Owner at the oral hearing. Specifically, Petitioner's objections are: (1) *Crocs v. International Trade Commission*, 598 F.3d 1294 (Fed. Cir. 2010) was not of record; (2) Patent Owner's arguments regarding unpredictable results constitutes new argument; (3) Patent Owner's description of Mashinsky having invented the use of IP for a low cost, low quality network constitutes new argument; and (4) reference to page 276 of the Peterson reference constitutes new argument. Hr'g Tr. 40–41, 47, 60–61, 64, 71–72, 74.

Patent Owner relies on *Crocs*, for the first time at oral hearing, for having facts similar to the present case. *Id.* at 60–61. Petitioner has had no prior opportunity to review and address the facts and, therefore, we sustain Petitioner's objection.

For the first time at oral hearing, Patent Owner argues that the '879 patent discloses unpredictable results and the '879 patent was the first to use IP as a low cost, low quality bridging network between two PSTNs. Parties are not permitted to raise new arguments or evidence at oral hearing. *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,768 (Aug. 14, 2012). Patent Owner asserts that the arguments in contention were presented in response to Petitioner's new argument in Petitioner's Reply. Hr'g Tr. 47–48. According to Patent Owner, Petitioner in its Reply argued that "the '879 patent, itself, was evidence that somehow the IP quality problems were a non-issue." *Id.* at 47. There is, however, no such exception to the rule against asserting new argument during oral argument. Petitioner's objection to Patent Owner's arguments relating to unpredictable results and Mashinsky's invention of the use of IP as a low cost, low quality bridging network between two PSTNs is sustained.

Finally, we overrule Petitioner's objection to Patent Owner's reference to page 276 of the Peterson reference (Ex. 2015). Exhibit 2015 was submitted as evidence with the Patent Owner Response. Page 276 of Exhibit 2015 states that "one of the biggest challenges [for IP] will be to provide quality or service guarantees that are suitable for high-quality voice and video, [which] is likely to be available in ATM networks from the outset" and that "IP, at present, . . . is best suited to those [applications] without real-time constraints." Patent Owner merely refers to a plain statement on a page of Peterson that was previously provided to Petitioner, in support of Patent Owner's pre-existing argument that Kammerl was concerned with providing high quality voice service, beyond the capability of IP. *See, e.g.*, PO Resp. 5, 15–19, 29–30, 41–43.

D. Alleged New Arguments in Petitioner's Reply

As discussed above, Patent Owner asserts Petitioner presented a new argument in its Reply regarding whether the '879 patent's failure to address the issues of sending voice data over IP provides support for Petitioner's position that IP quality problems were not an issue at the time of invention of the '879 patent. Hr'g Tr. 47–48. However, Petitioner's argument was raised in response to Patent Owner's allegations of a teaching away and, thus, was properly responsive to argument raised in the Patent Owner Response.

E. Section 103(a) Patentability

First, we address the limitations of each of the claims as set forth in Petitioner's challenge in sections 1–4 below. In section 5, we address Petitioner's rationale for combining the references and Patent Owner's argument that Kammerl cannot be combined with Iwami.

1. Subject Matter of Claims 1–7 and 15

The Board instituted trial on Petitioner's challenge of obviousness of claims 1–7 and 15 over Kammerl and Iwami. Dec. on Inst. 21–28. Petitioner relies on Kammerl as teaching each limitation of independent claim 1 except for the limitation reciting "the second format being an internet protocol." Pet. 47–52. As discussed above, Kammerl discloses a method and system for transmitting voice signals, including using a packet network as a transit network between two PSTNs. Ex. 1013, 5:57–61. Petitioner argues that Kammerl teaches each of the limitations of independent claim 1 except for using an internet protocol because Kammerl discloses receiving a transmission from a first device connected to a PSTN in a format used by an analog or digital phone network, converting the

transmission to a second format used by Kammerl's ATM network, sending the converted transmission across the ATM network, and, in the case where the packet network serves as a transit network, converting the transmission back to a format used by an analog or digital phone network. Pet. 47–52.

Petitioner argues Iwami teaches a second format that is an internet protocol because Iwami discloses, as discussed above, a system that sends voice transmissions between a network using IP and a phone network. *Id.* at 49–50. Petitioner provides claim charts and explanations demonstrating where each of the limitations of claims 1–7 and 15, other than "the second format being an internet protocol," is taught by Kammerl. *Id.* at 47–55. Petitioner asserts Iwami teaches "the second format being an internet protocol" and, in addition to Kammerl, teaches "the second conversion is performed at the second access device," as recited in claim 6. *Id.* at 23–24, 41–42, 49, 54.

Patent Owner does not dispute that Kammerl and Iwami teach the limitations for which Petitioner cites each reference. Having reviewed the evidence of record, we are persuaded Petitioner has demonstrated that Kammerl and Iwami teach the limitations recited in claims 1–7 and 15.

2. Subject Matter of Claims 8, 9, and 11–13

The Board instituted trial on Petitioner's challenge of obviousness of claims 8, 9, and 11–13 over Kammerl, Iwami, and Kobayashi. Dec. on Inst. 28–30. Petitioner asserts Kobayashi teaches the additional limitations recited in dependent claims 8, 9, 11, and 13 related to routing based on user preferences because "Kobayashi teaches a method of improving transmission quality by routing on the basis of the recorded preferences of users of the network." Pet. 56 (citing Ex. 1007, 3:20–25); *id.* at 25–27, 28–

29, 56–58. Petitioner further contends Kammerl teaches "the transmission comprises execution of a call setup procedure," as recited in dependent claim 12 because Kammerl discloses "call setup procedures that involve inserting signaling procedure signals from subscriber[s'] sets into packets and relaying them between the subscriber[s'] sets." Pet. 57. Petitioner provides claim charts demonstrating where each of the additional limitations of claims 8, 9, and 11–13 is taught by the references. *Id.* at 25–29, 56–58.

Patent Owner does not dispute that Kammerl, Iwami, and Kobayashi teach the limitations for which Petitioner cites each reference. Having reviewed the evidence of record, we are persuaded Petitioner has demonstrated that Kammerl, Iwami, and Kobayashi teach the limitations recited in claims 8, 9, and 11–13.

3. Subject Matter of Claim 10

The Board instituted trial on Petitioner's challenge of obviousness of claim 10 over Kammerl, Iwami, Kobayashi, and Chau. Dec. on Inst. 30–31. Petitioner argues Chau teaches "wherein the at least one criteria comprises credit availability of a calling party," as recited in dependent claim 10 because Chau discloses performing a credit check on callers. Pet. 29, 58. Petitioner provides a claim chart demonstrating where the additional limitation of claim 10 is found in Chau. *Id.* at 29.

Patent Owner does not dispute that Kammerl, Iwami, Kobayashi, and Chau teach the limitations for which Petitioner cites each reference. Having reviewed the evidence of record, we are persuaded Petitioner has demonstrated that Kammerl, Iwami, Kobayashi, and Chau teach the limitations recited in claim 10.

4. Subject Matter of Claim 14

The Board instituted trial on Petitioner's challenge of obviousness of claim 14 over Kammerl, Iwami, and Gordon. Dec. on Inst. 31–32. Petitioner argues Gordon teaches a transmission "related to a fax transmission," as recited in dependent claim 14 because Gordon discloses sending a fax transmission over a data network. Pet. 20–21, 58–59. Petitioner provides a claim chart demonstrating where the additional limitation of claim 14 is found in Gordon. *Id.* at 20–21.

Patent Owner does not dispute that Kammerl, Iwami, and Gordon teach the limitations for which Petitioner cites each reference. Having reviewed the evidence of record, we are persuaded Petitioner has demonstrated that Kammerl, Iwami, and Gordon teach the limitations recited in claim 14.

5. Combinability of Cited Art

Petitioner argues Kammerl teaches the general concept of using a data network as a transit network between two PSTNs (Pet. Reply 3–6), including sending, receiving, and converting transmissions in such a hybrid network. Pet. 47–59. Thus, as discussed above, Petitioner asserts Kammerl teaches each limitation of independent claim 1 except for the limitation of "the second format being an internet protocol," Iwami teaches a second format that is an internet protocol, and it would have been obvious to a person of ordinary skill in the art to use the Internet Protocol taught by Iwami in the network topology taught by Kammerl. *Id.* at 47–52. Petitioner argues a person having ordinary skill in the art ("PHOSITA"), at the time of invention of the '879 patent, would have combined Kammerl and Iwami to allow "voice communications to be transmitted on networks other than ATM

networks[, which] is the reason that internetworking or internet protocols such as the Internet Protocol were developed—to allow internetworking of diverse networks." *Id.* at 49.

Patent Owner acknowledges that one teaching of Kammerl is a "generic network topo[logy] that shows a packet switch[ed] network . . . serving as a bridging network between PSTN to PSTN." Hr'g Tr. 31:18–21. However, Patent Owner argues that Kammerl's purpose is to reduce lag times when transmitting voice packets over a data network in order to improve the transmission quality and reduce the need for expensive echo-cancellation equipment. PO Resp. 30. Patent Owner further argues Kammerl was designed to meet the high quality of service levels required by traditional PSTN customers (*see, e.g.*, Hr'g Tr. 32, 35, 37–39) and that IP "was not capable of providing high quality voice services" in 1996. *Id.* at 40 (quoting Ex. 2015, 276 ("For IP, one of the biggest challenges will be to provide quality of service guarantees that are suitable for high quality voice and video, something that is likely to be available in ATM networks from the outset")). Thus, Patent Owner contends that a PHOSITA would not have used Iwami's IP over Kammerl's ATM network, or substituted Iwami's packet network using IP for Kammerl's ATM network, because the teachings of Kammerl outweigh the asserted benefit of internetworking provided by Iwami. PO Resp. 28–53. Specifically, Patent Owner argues that Kammerl teaches away "from implementations that would introduce lag" and that using IP over an ATM network (or substituting Iwami's IP network for Kammerl's ATM network) necessarily introduces delays associated with processing (i.e., reassembly and segmentation) the data

packets at each router the packets encounter, rendering Kammerl inoperable. *Id.* at 32–41, 52–53.

Petitioner responds that Patent Owner focuses on one particular teaching of Kammerl and ignores Kammerl's broader teaching that a data network can be used as a transit network between two PSTNs. Pet. Reply 5–6. Petitioner asserts that, even assuming using IP for voice transmission with reduced packet filling according to Kammerl's specific invention would increase delay, Kammerl's teachings as a whole must be considered rather than focusing on one particular teaching. *Id.* at 12–13 (citing *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983); *see also EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985) ("A reference must be considered for everything it *teaches* by way of technology and is not limited to the particular *invention* it is describing and attempting to protect."). Petitioner also argues that Patent Owner's examples of how the combination of Iwami and Kammerl would introduce delay actually demonstrates that the combination does work, refuting Patent Owner's argument that the combination would be inoperative or nonfunctional. Pet. Reply 13–14.

As an initial matter, we note that the challenged claims have a broad scope. For example, independent claim 1 is directed to a method comprising receiving a transmission in a telecommunication protocol format, converting the transmission into an internet protocol format, sending the transmission through a data network, and converting the transmission into a telecommunication protocol format.

Claims 2–7, 12, 14, and 15 further define details relating to where certain method steps occur and the types of communications, parties, networks, and devices involved in a transmission. Claim 8 recites an

additional step of routing based on criteria defined by user preferences and claims 9–11 further define the criteria used in routing decisions. Claim 13 recites an additional step of storing information related to the transmission.

As discussed above, independent claim 1 of the '879 patent differs from Kammerl only in that the data network disclosed by Kammerl does not use an internet protocol and, thus, Kammerl does not disclose that the recited second format is an internet protocol. With respect to Iwami, independent claim 1 of the '879 patent differs from Iwami in that Iwami only discloses a single conversion from a telecommunication protocol to an internet protocol. Iwami does not disclose performing the recited second conversion.

We are not persuaded by Patent Owner's argument that Kammerl's focus on reducing lag results in a teaching away from any combination that would increase lag times. *See* PO Resp. 41–43. Patent Owner does not point to, nor do we see, anything in Kammerl that "criticize[s], discredit[s], or otherwise discourage[s] the solution claimed in the" '879 patent or otherwise rises to the level of a teaching away. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Moreover, while Kammerl's purpose was to speed up transmission of voice data over an ATM network and may have provided a high quality of service intended to meet standards demanded by traditional PSTN customers, nothing recited in the broad claims of the '879 patent requires a system meeting such quality standards.[9]

Furthermore, there is nothing in Kammerl stating that a network using an internet protocol would not function as a transit network between two

[9] Claim 9 broadly recites that a route for transmission is selected based on a user-specified level of transmission quality, but does not recite any limitation that would preclude a PHOSITA from considering the use of IP.

PSTNs. In fact, Kammerl's invention is directed specifically to an improvement on ATM or fixed-length packet networks. Kammerl never mentions, and thus, never criticizes, discredits, or otherwise discourages, using a network with messages formatted in an internet protocol as a transit network between two PSTNs.

Patent Owner focuses on what Kammerl's goals and considerations were at the time of Kammerl's invention. However, for purposes of an obviousness analysis, we look to what a PHOSITA would have considered obvious when looking to the relevant art, including Kammerl and Iwami, and whether that PHOSITA would have found it obvious to combine the teachings found in the art to result in the claimed invention at the time of invention of the '879 patent.

Regarding Patent Owner's teaching away argument, we look to whether the references teach away from the broad challenged claims. *See In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) ("a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be *productive of the result sought by the applicant*") (emphasis added). Patent Owner admits that the '879 patent uses IP for applications where it is acceptable to have low quality. Hr'g Tr. 45:17–46:3, 46:20–47:16.

Regardless of whether a transit network using IP would have met the high quality of service expected by PSTN to PSTN customers, a PHOSITA would have at least considered an internet protocol, such as the IP network disclosed in Iwami, as an obvious choice for a protocol to transmit voice data between two PSTNs. The PHOSITA would have considered it obvious to use such a design for applications where a lower quality of service was

acceptable. Even if the PHOSITA would have concluded that such a design would not suffice for certain applications[10] or would not have been commercially successful, it would have been an obvious to that PHOSITA that combining Kammerl and Iwami would result in an operable system.

Patent Owner points to evidence indicating that "one of the biggest challenges" for IP around the time of the invention would be "to provide quality of service guarantees that are suitable for high-quality voice and video." *Id.* at 40 (quoting Ex. 2015, 276). Although Patent Owner's evidence indicates that the IP community faced challenges to provide Quality of Service *guarantees* for high-quality voice and video, that evidence indicates those skilled in the art were considering using IP for *high-quality* voice applications. Moreover, that evidence provides little insight as to whether a PHOSITA would have considered it obvious to use IP in a bridging network between two PSTNs in applications where Quality of Service guarantees were not important.

Furthermore, we do not find Patent Owner's argument that Petitioner was unable to identify a single "patent or reference that disclosed . . . IP as a bridging network between PSTN-to-PSTN calls" persuasive. Hr'g Tr. 39. Petitioner's challenges to the claims of the '879 patent are not based on anticipation under 35 U.S.C. § 102, but obviousness under 35 U.S.C. § 103(a).

In light of the scope of the claims, the differences between the recited claims and the cited references, and the state of the art at the time of

[10] We find Patent Owner's argument that, in 1996, it was known that IP "was ill-suited for real[-]time applications like voice" supports a finding that using IP as a transit network, even if less than ideal, would have been obvious.

invention of the'879 patent[11], we find the rationale provided by Petitioner for combining Kammerl and Iwami to be persuasive. The Petitioner has established that a PHOSITA, at the time of invention of the '879 patent, would have been aware of both Kammerl's disclosure of transmitting voice between two PSTNs using an ATM network as a transit network and Iwami's disclosure of transmitting voice between an IP network and a phone network.

We find a PHOSITA would have considered using an IP network as a transit network between two PSTNs in order to provide the benefits of simpler internetworking of diverse networks, even at the expense of potentially slower transit speeds. Ex. 1002 ¶ 227. Additionally, we also find persuasive Petitioner's contention that "an internet protocol network [was] one of a finite number of identified communications mechanisms that were well-known at the time." *Id.* ¶ 229. Thus, even if a PHOSITA would have considered the benefits of using IP as a protocol for a transit network between two PSTNs to not be worth the tradeoff in transit time, the Petition establishes that modifying Kammerl to use an internet protocol as taught by Iwami would have been obvious to that PHOSITA. Therefore, we find Petitioner has demonstrated by a preponderance of the evidence that one of ordinary skill in the art would have combined Kammerl and Iwami and that the combination of Kammerl and Iwami teaches the subject matter recited in claims 1–7 and 15.

[11] Mr. Stephen B. Weinstein (declarant for Patent Owner) and Dr. Vincent C. Jones (declarant for Petitioner) both indicated that the Internet and IP were "coming to prominence from 1994 through 2001." Ex. 1022. 18:15–21; *see also* Ex. 1002 ¶¶ 30–32.

Petitioner argues that incorporating each of Kobayashi, Chau, or Gordon with Kammerl's teachings is merely applying well-known techniques to Kammerl in a known way to achieve predictable results. Pet. 56, 58, 59. We are persuaded that Petitioner has demonstrated by a preponderance of the evidence that one of ordinary skill in the art would have combined Kobayashi with Kammerl and Iwami and that such a combination teaches the subject matter recited in claims 8, 9, and 11–13. We are persuaded that Petitioner has demonstrated by a preponderance of the evidence that one of ordinary skill in the art would have combined Chau with Kammerl, Iwami, and Kobayashi and that such a combination teaches the subject matter recited in claim 10. We are persuaded that Petitioner has demonstrated by a preponderance of the evidence that one of ordinary skill in the art would have combined Gordon with Kammerl and Iwami and that such a combination teaches the subject matter recited in claim 14.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that: claims 1–7 and 15 are unpatentable over Kammerl and Iwami; claims 8, 9, and 11–13 are unpatentable over Kammerl, Iwami, and Kobayashi; claim 10 is unpatentable over Kammerl, Iwami, Kobayashi, and Chau; and claim 14 is unpatentable over Kammerl, Iwami, and Gordon.

IV. ORDER

In consideration of the foregoing, it is:

ORDERED that claims 1–15 of the ’067 patent are held *unpatentable*; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

For Patent Owner:

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