

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

AIP ACQUISITION LLC,
Patent Owner.

Case IPR2014-00247
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

Cisco Systems, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–15 of U.S. Patent No. 7,724,879 B2 (“the ’879 patent”) under 35 U.S.C. §§ 311–319. On May 27, 2014, the

Board instituted an *inter partes* review of claims 1–8, 12, and 15 on one asserted ground of unpatentability and of claim 14 on another ground of unpatentability (“Dec. on Inst.”). Paper 14, 34. Subsequent to institution, AIP Acquisition LLC (“Patent Owner”) filed a Patent Owner Response (“PO Resp.”). Paper 21. Petitioner filed a Reply (“Pet. Reply”) to the Patent Owner Response. Paper 26. Oral hearing was held on January 7, 2015.¹

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 claims 1–8, 12, 14, and 15 are unpatentable.

A. The ’879 Patent (Ex. 1001)

The ’879 patent, which expired on October 11, 2014, 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 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

¹ The record includes a transcript of the oral hearing (“Hr’g Tr.”). Paper 38.

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 claims under review, is illustrated by the conceptual block diagram in Figure 9, reproduced below:

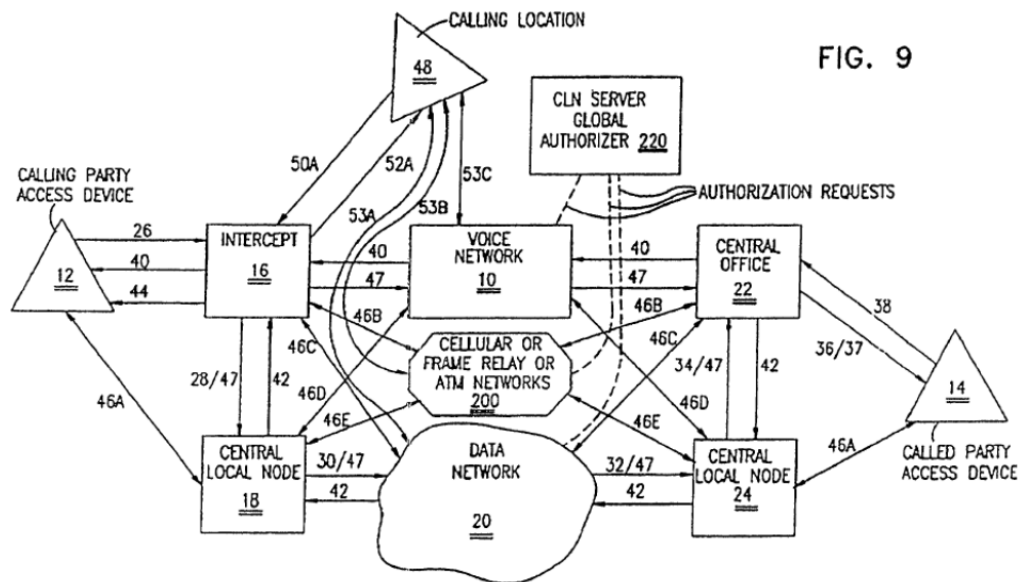


Figure 9 provides an overview of the transmission flow between a calling party and a called party. *See id.* at 6:36–56. In Figure 9 of the '879 patent, a conceptual block diagram depicts the principles of operation of the method, as recited in independent claim 1, for transmitting voice communications 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 10² or another network 200, such as a cellular, Asynchronous Transfer Mode (ATM), or frame relay network. *Id.*; *see 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 (in the case where the transmission was transmitted over data network 20) to another format suitable for reception by access device 14, such as the telecommunications protocol from which the transmissions were converted originally. *See id.* at 4:34–42.

² In Figure 9 of Ex. 1001, communications network 10 is identified as “voice network 10.”

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

Petitioner identified the following district court actions in which the '879 patent is involved: *AIP Acquisition LLC v. Cox Communications Inc.*, Civ. Action No. 12-01691 (D. Del.); *AIP Acquisition LLC v. Charter Communications Inc.*, Civ. Action No. 12-01689 (D. Del.); *AIP Acquisition LLC v. Comcast Corp.*, Civ. Action No. 12-01690 (D. Del.); *AIP Acquisition LLC v. Time Warner Cable Inc.*, Civ. Action No. 12-01692 (D. Del.); and *AIP Acquisition LLC v. Cablevision Systems Corp.*, Civ. Action No. 12-

01688 (D. Del.). Pet. 1. The '879 patent was also the subject of *Level 3 Communications, LLC v. AIP Acquisition LLC*, IPR2013-00296 (PTAB), an *inter partes* review in which the Board found claims 1–15 unpatentable.

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. 33–34):

References	Basis	Claim(s) Under Review
Weinstein ³ and RFC1190 ⁴	§ 103(a)	1–8, 12, and 15
Weinstein, RFC1190, and ISI ⁵	§ 103(a)	14

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms of an expired patent are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art, at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313–1317 (Fed. Cir. 2005) (en banc). However, there still is no presumption of validity, Petitioner's

³ Clifford J. Weinstein and James W. Forgie, *Experience with Speech Communication in Packet Networks*, IEEE J. ON SELECTED AREAS IN COMM'NS, SPECIAL ISSUE ON PACKET SWITCHED VOICE AND DATA COMM'NS, vol. SAC-1, no. 6, 963–980 (1983) (Ex. 1010) (“Weinstein”).

⁴ Request for Comments 1190, “Experimental Internet Stream Protocol, Version 2 (ST-II),” C. Toplocic ed. (1990) (Ex. 1011) (“RFC1190”).

⁵ Univ. of S. Cal. Info. Scis. Inst., “1982 Annual Technical Report: A Research Program in Computer Technology,” Report No. ISI/SR-83-23, Chapter 7 (March 1983) (Ex. 10014) (“ISI”).

burden of proof is still by a preponderance of the evidence, and we do not apply a rule of construction with an aim to preserve the validity of claims. Moreover, a “claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a special definition or other consideration, “limitations are not to be read into the claims from the specification.” *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

In this proceeding, we provided a preliminary construction of “an internet protocol,” “signaling messages,” and “wherein the transmission comprises execution of a call setup procedure,” using a broadest reasonable interpretation. Dec. on Inst. 10–17. We requested briefing by the parties with respect to what the proper construction of the disputed terms would be once the ’879 patent expired. Paper 17. Upon reviewing the briefs submitted by the parties (*see* Papers 18, 19), we found that our preliminary construction of those terms did not change when applying a rule of construction similar to that used by district courts. Paper 20, 3. At oral argument, both parties acknowledged that only the construction of “internet protocol” affects the issues in this case. Hr’g Tr. 25:24–26:2, 36:17–22. Therefore, “internet protocol” is the only term for which we provide an express construction in this Decision.

Our preliminary construction of “internet protocol” was “a set of rules, instructions, or procedures relating to the format and timing of data

transmissions between two devices over the Internet, such as TCP/IP,” which does not encompass ATM and frame relay protocols. Dec. on Inst. 16. Petitioner argues that the Board’s preliminary construction of “internet protocol” set out in the Decision on Institution is the correct construction. Pet. Reply 3–5. Patent Owner argues in its Patent Owner Response that the preliminary construction should be limited further as follows (proposed changes underlined): a set of conventional rules, instructions, or procedures relating to the format and timing of data transmissions between two devices over the Internet, such as TCP/IP, where internet protocols do not include ATM and frame relay protocols or their equivalents. PO Resp. 10–12. However, at oral hearing, Patent Owner withdrew its contention that the term “conventional” should be included in the construction of “internet protocol.” Hr’g Tr. 50:11–17. Essentially, Patent Owner desires to narrow the construction such that it also excludes “equivalents” of ATM and frame relay protocol.

Claim 1 recites converting a transmission from a first format to a second format, the second format being an “internet protocol.” The ’879 patent does not define expressly the term “internet protocol,” but states the following:

Both servers 60, 62 are networked *using transmission control protocol/Internet protocol TCP/IP, which is a set of protocols that link dissimilar computers across a variety of other networks and protocols as conventionally used on local area networks, minicomputers and mainframes*, or are networked with a router in the case of an ATM.

Ex. 1001, 7:45–50 (emphasis added). That section of the Specification, however, refers specifically to “transmission control protocol/Internet

protocol TCP/IP.” The prior paragraph of the ’879 patent includes the following sentence:

The Internet network differs from frame relay switching and asynchronous transfer mode by using internet protocols such as transmission control protocol/Internet protocol (TCP/IP), which is a set of protocols developed by the Department of Defense to link dissimilar computers across a variety of other networks and protocols.

Ex. 1001, 7:34–39. Other than the recitation in claim 1, that sentence quoted above is the only reference in the ’879 patent to “internet protocol,” with a lowercase “i” and a lowercase “p.” That sentence explains that TCP and IP are examples of “internet protocols,” and that TCP/IP is a specific set of protocols that links dissimilar computers across various networks and protocols. That sentence also explains that the Internet’s use of internet protocols distinguishes the Internet network from frame relay switching and ATM networks. Patent Owner argues that, combined with the knowledge of a skilled artisan at the time of invention, that sentence supports a construction of “internet protocols” that excludes “equivalents” of ATM and frame relay protocols. PO Resp. 10–11.

Tanenbaum⁶, which is contemporaneous with the invention of the ’879 patent, states that there were two common styles of internetworking, “a connection-oriented concatenation of virtual circuit subnets, and a datagram internet style.” Ex. 2009, 401–403. Therefore, Patent Owner urges us to adopt a construction of “internet protocol” that excludes “equivalents” to ATM and frame relay protocols, which Patent Owner argues includes all

⁶ Andrew S. Tanenbaum, *Computer Networks*, 3rd Edition, PRENTICE-HALL (1986) (Ex. 2009) (“Tanenbaum”).

protocols used in virtual circuit networks. *Id.* at 10–11; Hr’g Tr. 33:11–34:2.

We find, however, that this argument conflates networks with protocols. Although the ’879 patent clearly distinguishes the Internet from ATM and frame relay switching networks, it does so by stating that the Internet uses internet protocols and ATM and frame relay switching do not. Based on the evidence presented, we do not find that an ordinarily skilled artisan would have understood internet protocols to exclude protocols that may be used with all virtual circuit networks or, more to the point, used to connect concatenated virtual circuit subnets. Additionally, as pointed out by Petitioner, nothing in the ’879 patent mentions virtual circuit networks or protocols. *See* Pet. Reply 5–6. Although the ’879 patent mentions ATM and frame relay switching networks and the fact that they do not use internet protocols, there is no discussion of the fact that ATM and frame relay switching are virtual circuit networks or what protocols ATM and frame relay switching use. Furthermore, the specification of the ’879 patent provides no explanation or insight regarding what would be an equivalent to ATM or frame relay switching, such that adding “equivalents” to the construction of “internet protocol” would introduce ambiguity. Therefore, even if we were to exclude ATM and frame relay switching protocols “and their equivalents,” we find no support for an understanding that all protocols used in virtual circuit networks would be equivalents to ATM and frame relay switching protocols.

The ’879 patent makes no mention of whether internet protocols are limited to datagram networks or whether internet protocols also may be used in virtual circuit networks. We have found nothing, and neither Patent

Owner nor Petitioner has pointed to anything, in the '879 patent indicating that the inventor expressed a definition for “internet protocol.” Therefore, we construe “internet protocol” according to its ordinary and customary meaning as would have been understood by an ordinarily skilled artisan at the time of invention of the '879 patent. To help us glean that meaning, we look to the extrinsic evidence submitted by the parties.

According to Patent Owner, in 1996, internetworking was understood to be the transmission of data through different networks, using either “‘a connection-oriented concatenation of virtual circuit subnets [or] a datagram internet style.’” Ex. 2013 ¶ 29 (quoting Ex. 2009, 401–403). Weinstein uses the terms “internet” and “internetwork” interchangeably. *See* Ex. 1010 *passim*. A “protocol” is “[a] specific set of rules, procedures or conventions relating to the format and timing of data transmission between two devices.” NEWTON’S TELECOM DICTIONARY (11th ed. 1996) (Ex. 3001).

Patent Owner argues that “TCP/IP protocols were developed in [the] 1970s to handle data communication over internetworks as more and more networks were connected to the ARPANET.” Ex. 2013 ¶ 38. The evidence submitted in this proceeding explains that internetworking is communicating among dissimilar networks. *See, e.g.*, Ex. 1010, 1 (“techniques have been developed for internetwork communication, among dissimilar nets”); Hr’g Tr. 45:19–23. Tanenbaum explains that, for internetworks comprised of concatenated virtual circuit networks, internetworking was accomplished through the use of multiprotocol routers (or gateways) between disparate virtual circuit networks. Ex. 2009, 8–9. The gateways convert the messages between the different protocols used by the disparate networks. *Id.* at 8. Datagram networks similarly use gateways between disparate networks and

may translate protocols between networks. *Id.* at 9–10. Tanenbaum, however, explains that an alternate approach is to use “universal ‘internet’ packet[s]” that all routers would recognize and “designed to be carried through many networks,” i.e., internet protocols. *Id.* at 10.

The extrinsic evidence of record, in combination with the statement in the ’879 patent (“internet protocols such as transmission control protocol/Internet protocol (TCP/IP)”), indicates that the Internet is one example of internetworking and Internet Protocol is one example of “an internet protocol.” *Id.*; Ex. 1001, 7:34–39. Accordingly, we construe an internet protocol to be “a specific set of rules, procedures, or conventions relating to the format and timing of data transmission between two devices on different networks.” As discussed, the ’879 patent states that the Internet differs from frame relay switching and ATM in that the Internet uses internet protocols, such as TCP/IP. Thus, the protocols used *within* ATM and frame relay switching networks are not internet protocols.

B. Submitted Evidence

1. Weinstein (Ex. 1010)

Weinstein is an article published in the December 1983 issue of IEEE Journal on Selected Areas in Communications. Weinstein describes research work sponsored by the United States’ Defense Advanced Research Projects Agency (“DARPA”) which began with experiments conducted over the Advanced Research Projects Agency Network (“ARPANET”). Ex. 1010, 1. The work continued as the ARPANET was connected to additional networks, including the wide-band packet satellite network (WB SATNET). *Id.* The relevant structural details of the interconnected

networks may be better understood by referencing Figure 9 of Weinstein, which is reproduced below.

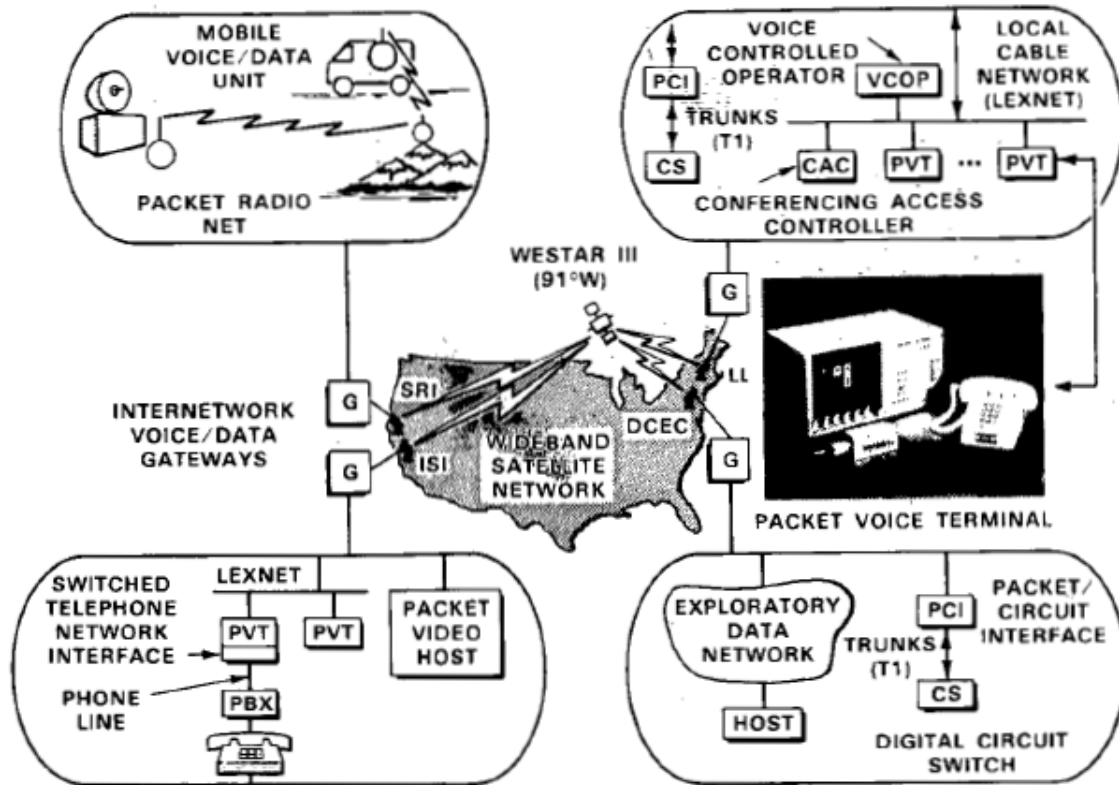


Figure 9 of Weinstein depicts a “[w]ide-band internetwork packet voice/data system, with illustration of primary local area facilities at each site.” *Id.* at 13.

In the lower left corner, Figure 9 depicts a telephone connected to a switched telephone network. Figure 9 depicts three other separate networks (i.e., a packet radio network, an exploratory data network, and a local cable network), all of which are joined together, along with the switched telephone network, via a wide-band satellite network. *Id.* at 13–15. Weinstein discloses “significant benefits” for integrating voice with data including potential cost savings, enhanced service, voice communications among users on different types of networks, control flexibility, and secure voice communications. *Id.* at 1.

Weinstein describes an Internet Stream Protocol (“ST”) which allows the interconnection of these four networks over a packet-based satellite network. *Id.* at 12. In the case of the switched telephone network, the signals used in the telecommunications network are converted into the ST protocol by the internetwork voice/data gateway. *Id.* at 11. The converted ST signal can then be transmitted through the wideband satellite network. *Id.* at 12.

2. RFC1190 (*Ex. 1011*)

RFC1190 is a publication describing version two of the Internet Stream Protocol (“ST-II”) which is a revised version of the ST protocol used in Weinstein. RFC1190 is intended to be easier to implement and supports a wider range of applications. *Ex. 1011*, Abstract. By way of introduction, RFC1190 explains that the motivation for the original ST protocol was that internet protocol (“IP”) did not support voice applications. *Id.* at 7. RFC1190 states that ST “is an internet protocol at the same layer as IP” and “proved quite useful in several early experiments that involved voice conferences in the Internet.” *Id.*

RFC1190 describes that portions of the Internet support ST-II and in areas where ST-II is not supported, the ST-II packets may be encapsulated in IP packets. *Id.* at 9. Encapsulating ST-II packets allows connections across Internet routers that do not support the ST protocol. *Id.* at 64. When encapsulating ST-II packets, performance on the Internet cannot be guaranteed. *Id.* at 65. However, Type-of-Service may be set to request specific service (e.g., low delay, high throughput, normal reliability). *Id.* at 64–65. Also, the Source Route Option may allow the originator of the data to pre-specify an explicit path to the target. *Id.* at 46.

3. *ISI (Ex. 1014)*

ISI is a report published in March 1983, a portion of which describes a wideband communication project that would transmit digitized voice over ARPANET. Ex. 1014, 9. Although the project concentrates on voice communication, the wideband communication project will work on integrated communication of several media, such as video. *Id.* The goal is to develop real-time multimedia teleconferencing using wideband packet-switched networks. *Id.* at 10. The report discusses the switch telephone network interface, which allows the telephone network to communicate with a packet voice system. *Id.* at 14, 16–18. The report also discusses experimentation with other media including facsimile. *Id.* at 22.

C. Asserted Obviousness of Claims 1–8, 12, and 15 in View of Weinstein and RFC1190

The Board instituted trial on Petitioner’s challenge of obviousness of claims 1–8, 12, and 15 over Weinstein and RFC1190. Dec. on Inst. 24–30. Petitioner asserts that Weinstein discloses all of the limitations of claims 1–8, 12, and 15. Pet. 14–16. Petitioner relies on RFC1190 for teaching that Weinstein’s ST is an internet protocol and, further, that RFC1190 teaches a second version of ST (i.e., ST-II) that is an internet protocol. *Id.* at 16, 25–28. Weinstein discloses converting a signal from a switched telephone network to ST format, which is then transmitted over ARPANET and a wide-band satellite network. Petitioner asserts that a person of ordinary skill in the art during the 1994–1996 time frame would have considered ARPANET and the wide-band satellite network to constitute a portion of the Internet. *Id.* at 15 (citing Ex. 1008, 14–15; Ex. 1019, 57). Petitioner further

asserts that it would have been obvious to one of ordinary skill in the art to replace the ST protocol disclosed in Weinstein with the ST-II protocol disclosed in RFC1190 because ST-II was a revision to ST and provided benefits, such as ease of implementation, support for a wider range of applications, eliminating the need for an explicit Access Controller, simplifying traffic stream management, and providing robustness and recovery mechanisms. Pet. 16–17 (citing Ex. 1011, 8).

Petitioner argues that ST, described in Weinstein, is an internet protocol because “[t]he ST protocol is ‘designed to be compatible with IP [Internet Protocol],’ and ‘operates at an internet level.’” Pet. 15 (quoting Ex. 1010, 966, 974). Weinstein explains that “[t]he lower level protocol, which has come to be named ‘ST,’ provides an efficient internet transport mechanism” and “operates at the same level in the protocol hierarchy as IP, the DoD standard internet protocol for datagram traffic.” Ex. 1010, 4. Furthermore, Petitioner challenges claims 1–8, 12, and 15 as obvious in view of the combination of Weinstein and RFC1190. Petitioner asserts that, to the extent Weinstein’s ST is not considered an internet protocol, ST-II, which is the successor protocol to ST disclosed by RFC1190, teaches an internet protocol. Pet. 14–18. Petitioner argues ST-II is merely a revised and updated version of ST and is an internet protocol for the same reasons that ST is an internet protocol. *Id.* at 14–16. Petitioner further argues ST-II is an internet protocol because RFC1190 explicitly “states that the revised ‘**ST is an internet protocol.**’” Pet. 16 (quoting Ex. 1011, 7). Finally, Petitioner argues RFC1190 teaches transmitting voice using an internet protocol because RFC1190 discloses encapsulating ST packets using

Internet Protocol, which the '879 patent identifies as an exemplary internet protocol. *Id.* at 16 (citing Ex. 1011, 64; Ex. 1001, 7:34–39).

Patent Owner acknowledges that internet protocols allow connection between two networks and that ST and ST-II provide a connection between two networks. Hr'g Tr. 45:19–46:1. Patent Owner explained that “[i]nternetworking requires the fact that you are going from one network to another . . . So to connect them is internetworking” and that, in order to connect two different types of networks, “the connections has to be the same, which is using NCP, NVP, so they can talk to each other.” *Id.* at 45:8–18. Patent Owner concluded – “That’s why the development of ST protocol.” *Id.* at 45:18. Thus, Patent Owner does not contest that ST and ST-II connect two disparate networks and admits that, if virtual circuit protocols are not excluded from the construction of “internet protocol,” ST-II is an internet protocol. *Id.* at 36:23–37:5, 68:16–18.

As discussed above with respect to the construction of “internet protocol,” Patent Owner argues the proper construction of “internet protocol” would exclude all protocols used in virtual circuit networks.⁷ PO Resp. 10–12. Patent Owner argues that Weinstein’s ST and RFC1190’s ST-II are not internet protocols because ST and ST-II are virtual circuit protocols.⁸ *Id.* at 11–12, 15–17; Hr’g Tr. 33:11–34:2. Our construction of “internet protocol,” however, does not exclude virtual circuit protocols.

⁷ As discussed above, Patent Owner has withdrawn its contention that “internet protocol” should be limited to conventional protocols.

⁸ Patent Owner’s prior contention that ST-II is not an internet protocol due to its experimental status is not commensurate with our construction of “internet protocol,” which is not limited to conventional protocols.

Therefore, based on our construction of “internet protocol” and the evidence submitted, Petitioner has established, by a preponderance of the evidence, that ST-II is an internet protocol. We do not reach the question of whether Petitioner has demonstrated, by a preponderance of the evidence, that ST is an internet protocol. Other than disputing the construction of “internet protocol,” Patent Owner disputes only that a skilled artisan would have combined Weinstein with RFC1190. PO Resp. 12–26; *see* Hr’g Tr. 37:20–24.

Patent Owner asserts the combination of Weinstein and RFC1190 would not have been obvious for various reasons. PO Resp. 12–14, 17–26. Specifically, Patent Owner argues that there would have been no justification to “resurrect a defunct system” and upgrade it to use the experimental ST-II protocol at the time of invention of the ’879 patent because the ARPANET, which formed the core of Weinstein, was shut down by 1990. *Id.* at 14. Thus, Patent Owner asserts that Weinstein was so flawed, there was no reason to upgrade it. *Id.* Patent Owner argues that encapsulating ST (presumably referring to version 2 or ST-II packets) in IP packets would be incompatible with Weinstein and violate Weinstein’s system requirements. *Id.* at 19. Patent Owner asserts the combination of Weinstein and RFC1190 would not have been obvious because ST-II is not compatible with ST and because there are major differences between ST and ST-II. *Id.* at 21–22. Patent Owner rehashes its arguments regarding the combinability of Weinstein and RFC1190 and asserts that combining Weinstein and RFC1190, therefore, is impermissible hindsight. *Id.* at 23–24.

Petitioner has submitted evidence of the implementation of ST-II in various systems near the time of invention of the ’879 patent. Ex. 1023, 1–

4; Ex. 1030, 4–6; Ex. 1034, 20–21. Moreover, RFC1190 indicates clearly that ST-II is a revised version of ST. Ex. 1011, 1; *see* Pet. 16. Petitioner also argues a skilled artisan would have been motivated to upgrade Weinstein’s ST with RFC1190’s ST-II because RFC1190 identifies various improvements and benefits of ST-II over ST. Pet. Reply 12 (citing Ex. 1011, 8). Petitioner asserts that the shutdown of ARPANET neither erased the knowledge and teachings conveyed by Weinstein nor led to shutting down the entirety of Weinstein’s disclosed system. *Id.* at 13. Petitioner argues that a skilled artisan is not an automaton and asserts that a skilled artisan would have been capable of the making the hardware upgrades necessary when migrating from ST to ST-II. *Id.* at 14.

We are persuaded by Petitioner’s arguments that an ordinary skilled artisan would have found it obvious to consider upgrading ST to ST-II, the version available at the time of invention of the ’879 patent. As pointed out by Petitioner, the fact that ARPANET no longer existed at the time of invention of the ’879 patent does not render all of the teachings of Weinstein unavailable to the hypothetical person of ordinary skill in the art. One would not have needed to “resurrect” the defunct ARPANET to take advantage of Weinstein’s teachings regarding combining voice networks with data networks. Rather, one would have gleaned the knowledge necessary to create a system using a data network to transport voice communication as a bridge between conventional telephony networks. We also agree with Petitioner that the submitted evidence regarding other internet engineers implementing systems adopting ST-II supports a conclusion that a skilled artisan would have been capable of making the necessary correlated changes to hardware in order to implement ST-II.

Finally, Patent Owner argues the references cited by Petitioner, including Weinstein, “show a long felt need for a packet voice system at least as early as 1976,” but that Weinstein “failed to gain adoption by the industry” and “[s]ince then, no one developed an intelligent voice routing system that bridges incompatible telecommunication networks via a conventional data network that uses an internet protocol as recited in Claim 1 of the ’879 Patent.” Prelim. Resp. 25. Patent Owner further argues that there was a long-felt but unresolved need because Petitioner has not challenged the claims as anticipated. *Id.* Petitioner asserts Patent Owner has presented no evidence supporting its argument of secondary considerations. *Id.* at 14–15.

To show failure of others, the evidence must establish that others skilled in the art tried and failed to find a solution for the problem solved by the appellant. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1540 (Fed. Cir. 1983). Moreover, allegation of an unsolved problem in the art is not indicative of nonobviousness unless it is shown “that the *widespread* efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem.” *In re Allen*, 324 F.2d 993, 997 (CCPA 1963) (emphasis added). Patent Owner presented no evidence of any actual attempts of others, which have failed. Additionally, Patent Owner asserts that feasibility was demonstrated by Weinstein, but that Weinstein failed to gain adoption and no other system was developed. Patent Owner, however, does not establish any reasons why Weinstein was not adopted, or other systems were not developed, that would show a failure to find a solution.

Thus, having reviewed the evidence of record, we are persuaded Petitioner has demonstrated by a preponderance of the evidence that

Weinstein and RFC1190 teach the limitations recited in claims 1–8, 12, and 15. Additionally, we are persuaded Petitioner has demonstrated by a preponderance of the evidence that it would have been obvious to a skilled artisan to upgrade ST to ST-II, thus teaching the elements as arranged in claims 1–8, 12, and 15. Therefore, we find that claims 1–8, 12, and 15 are unpatentable as obvious in view of Weinstein and RFC1190.

D. Asserted Obviousness of Claim 14 in View of Weinstein, RFC1190, and ISI

The Board instituted trial on Petitioner’s challenge of obviousness of claim 14 over Weinstein, RFC1190, and ISI. Dec. on Inst. 33. Claim 14 depends from claim 1 and further recites that the “transmission is related to a fax transmission.” Petitioner relies on the same combination of Weinstein and RFC1190 for teaching the limitations common to claims 1 and 14. Petitioner asserts that ISI discloses the possibility of using wideband communication for facsimile transmissions. Pet. 50–51. Petitioner further asserts that it would have been obvious to combine Weinstein’s network to send facsimiles as suggested by ISI, because Weinstein and ISI “describe inter-related research projects,” and a skilled artisan would have looked to ISI “for further details regarding the systems described in Weinstein.” *Id.* Moreover, Petitioner points to ISI’s statement that packet switching “must also expand to support media which have not been accommodated in the past.” *Id.* (quoting Ex. 1014, 13) (internal quotation marks omitted). Finally, Petitioner points to ISI, which describes “experimentation not only with several voice channels but also with other media, such as . . . facsimile.” *Id.* (quoting Ex. 1014, 22) (internal quotations marks omitted).

In addition, Petitioner asserts that Weinstein describes channel capacity savings when using a packet-based system for transmitting voice and that one of ordinary skill in the art would have recognized that similar savings would occur when sending a facsimile because it is largely a one-sided communication. *Id.* at 51.

Patent Owner asserts that Petitioner has failed to show that claim 14 is obvious for the same reasons asserted with respect to claim 1. PO Resp. 26. Patent Owner does not dispute that ISI teaches the additional limitation of claim 14 or that it would have been obvious to combine ISI with Weinstein. *Id.*

We find Petitioner has demonstrated, by a preponderance of the evidence, that ISI teaches a “transmission is related to a fax transmission,” as recited in claim 14, and that it would have been obvious to combine ISI with the proposed Weinstein-RFC1190 system. Therefore, we find that claim 14 is unpatentable as obvious in view of Weinstein, RFC1190, and ISI.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that claims 1–8, 12, and 15 are unpatentable over Weinstein and RFC1190, and claim 14 is unpatentable over Weinstein, RFC1190, and ISI.

IV. ORDER

In consideration of the foregoing, it is:

ORDERED that claims 1–8, 12, 14, and 15 of the '879 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.

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