

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COX COMMUNICATIONS, INC.,
Petitioner,

v.

AT&T INTELLECTUAL PROPERTY II, L.P.,
Patent Owner.

Case IPR2015-01187
Patent 6,993,353 B2

Before MICHAEL R. ZECHER, BRIAN P. MURPHY, and
SHEILA F. McSHANE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

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

I. BACKGROUND

Cox Communications, Inc. (hereafter “Cox” or “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–29 of U.S. Patent No. 6,993,353 B2 (Ex. 1001, “the ’353 patent”). AT&T Intellectual Property II, L.P. (hereafter “AT&T” or “Patent Owner”) filed a Preliminary Response to the Petition (Paper 7, “Prelim. Resp.”). Pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review of claims 1–29 of the ’353 patent on November 19, 2015. Paper 9 (“Dec. on Inst.” or “Institution Decision”). AT&T filed a Request for Rehearing (Paper 11) that was granted-in-part to clarify the grounds of institution (Paper 13, “Reh’g. Dec.”).

During the course of trial, AT&T filed a Response (Paper 37, “PO Resp.”), and Cox filed a Reply to the Patent Owner Response (Paper 41, “Pet. Reply”). We authorized AT&T to file a submission regarding the alleged improper scope of Petitioner’s Reply (Paper 43, “PO Obj.”), and we authorized Cox to file a response to AT&T’s submission (Paper 47, “Pet. Opp. Obj.”). AT&T filed a Motion to Exclude (Paper 51, “Mot. to Exclude”), with Cox filing an Opposition to the Motion to Exclude (Paper 55, “Opp. to Mot. Exclude”), and with AT&T filing a reply to the same (Paper 57). AT&T also filed a Motion for Observations (Paper 50, “Obs.”), regarding certain cross-examination testimony of Cox’s witness, Professor Nader Mir, Ph.D., and Cox filed a Response to the Motion for Observations (Paper 56, “Obs. Resp.”). A consolidated oral hearing was held on August 23, 2016, in relation to this proceeding and the following three proceedings, namely, Cases IPR2015-01227, IPR2015-01273, and IPR2015-01536, each

of which involves patents owned by AT&T or one of its affiliates.¹ A transcript (Paper 58, “Tr.”) of the oral hearing has been entered into the record.

We have jurisdiction under 35 U.S.C. § 6. 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 Cox has not shown, by a preponderance of the evidence, that claims 1–29 of the ’353 patent are unpatentable under 35 U.S.C. § 103(a). We *dismiss* AT&T’s Motion to Exclude as moot.

A. *The ’353 Patent*

The ’353 patent, titled “Cable Data Service Method,” issued January 31, 2006, from U.S. Patent Application No. 09/924,639, filed on August 8, 2001. Ex. 1001, at [54], [45], [21], [22]. The ’353 patent claims priority to

¹ Three days prior to the oral argument held on August 23, 2016, the parties notified us of roughly one hundred unresolved objections to the parties’ demonstratives. Given the sheer volume of objections leveled by both parties, we instructed the parties to meet and confer to attempt to resolve these objections. During oral argument, counsel for AT&T indicated that the parties did not meet and confer as we instructed them to do. Tr. 5:10–18. We see no need to resolve these objections at this time for the following two reasons: (1) the demonstratives are not of record in this proceeding; and (2) demonstratives do not constitute evidence and should not be used to introduce new argument or evidence. See Paper 54, 3 (stating “[d]emonstrative exhibits are not evidence, but merely a visual aid at the oral arguments.”); Tr. 5:21 (stating “demonstratives are not evidence”); see also *St. Jude Medical, Cardiology Division, Inc. v. The Board of Regents of the University of Michigan*, Case IPR2013-00041, slip op. at 2–3 (PTAB Jan. 27, 2014) (Paper 65) (“[D]emonstrative exhibits are not evidence; as such, the exhibits cannot add new evidence to the record of this proceeding. Nor can the exhibits rely on evidence that, although it is in the record, was never specifically discussed in any paper before the Board.”).

U.S. Provisional Application No. 60/275,665, filed on March 14, 2001. *Id.* at [60].

The '353 patent generally relates to increasing cable-modem connection speeds and, more specifically, to peak rate transmission rates. Ex. 1001, 2:52–53, 2:62–65. The method of the '353 patent increases transmission rates by dividing a transmit data stream into multiple data streams having a lower bit rate than the transmit data stream, transmitting them, and recombining them at a receive site to provide a receive data stream having a bit rate equal to the transmit data stream bit rate. *Id.* at 3:17–27. The '353 patent also includes descriptions of the structure and handling of the data streams, including packetizing of the data streams and tunneling processes. *See id.* at 3:39–44, 3:65–4:10, 5:4–11, 5:65–66, 6:3–6, 6:11–22, 6:38–39.

B. Illustrative Claim

Of the challenged claims, claim 1 is the only independent claim. Claims 2–29 depend directly or indirectly from independent claim 1. Ex. 1001, 12:23–14:15. Claim 1 is reproduced below:

1. A method of sending data from a transmit site to a receive site, the method comprising:

dividing a transmit data stream having a first bit rate into multiple data streams with each of the multiple data streams having a bit rate which is lower than the first bit rate;

transmitting each of the multiple data streams over a cable network comprising a plurality of RF channels, wherein at least one of the RF channels has connections to a plurality of users and the connections to the plurality of users are between the transmit site and the receive site; and

recombining the multiple data streams at the receive site to provide a receive data stream having a bit rate equal to the first bit rate.

Id. at 12:11–22.

C. Related Matters

According to the parties, the '353 patent is involved in the following district court case: *AT&T Intellectual Prop. I, L.P. v. Cox Commc'ns, Inc.*, No. 14-1106-GMS (D. Del.). Pet. 1; Paper 5, 2.

D. Prior Art Relied Upon

Cox relies upon the following prior art references:

Reference	Patent Number	Relevant Dates	Exhibit No.
Amit	US 7,274,679 B2	issued Sept. 25, 2007, filed Jan. 16, 2001	1003
Rasanen	US 6,128,322	issued Oct. 3, 2000, filed July 5, 1996	1006
Liva	US 6,993,016 B1	issued Jan. 31, 2006, filed Nov. 16, 2000	1007

E. The Instituted Grounds of Unpatentability

We instituted the instant *inter partes* review of claims 1–29 of the '353 patent on the following grounds of unpatentability, with clarification of the instituted grounds on a per claim basis provided in the Rehearing Decision (Dec. on Inst. 21; Reh'g. Dec. 8):

References	Basis	Claim(s) Challenged
Rasanen	§ 103(a)	1
Amit and Rasanen	§ 103(a)	2–12, 15–26, and 28
Amit, Liva, and Rasanen	§ 103(a)	13, 14, 27, and 29

II. ANALYSIS

A. Claim Construction

“A claim in an unexpired patent that will not expire before a final written decision is issued shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under that broadest reasonable interpretation standard, and absent any special definitions, claim terms generally are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech. Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Cox provided no proposed construction for the term “cable network” in its Petition. In its Preliminary Response, AT&T proposed that the term “cable network” be construed as “*a network which transmits signals via cables, rather than over the air.*” Prelim. Resp. 9. AT&T referred to the Specification and prosecution history of the ’353 patent for support, contending that the term “cable network” was distinguishable from a “wireless system, wherein signals are transmitted over the air.” *Id.* at 8–9 (citing Ex. 1001, 5:39–49; Ex. 1002, 149–50). AT&T alleged that construing this term as “cable-centric,” and exclusive of wireless networks, also was consistent with the plain meaning of the term “cable network.” *Id.* at 9–10.

In the Decision to Institute, we found that the ’353 patent does not provide a special definition for the term “cable network” and, therefore, deferred to the term’s ordinary and customary meaning as would be

understood by one of ordinary skill in the art in the context of the entire disclosure of the '353 patent. Dec. on Inst. 6–7; *see Translogic*, 504 F.3d at 1257. We explained that the Specification of the '353 patent states that a Hybrid Fiber Coaxial (“HFC”) network “corresponds to a cable network utilizing a combination of optical fibers and coaxial cables of the types known to be used in the cable television industry for transmission of television signals.” Dec. on Inst. at 7 (citing Ex. 1001, 5:39–43). We further explained that the '353 patent describes an alternate embodiment, where an HFC type of cable network “could be replaced with a wireless system.” *Id.* We, therefore, determined that these portions of the Specification reflect the plain and ordinary meaning of the term “cable network” as a network that transmits signals via cables. *Id.* Based on this analysis, we adopted the language in AT&T’s proposed construction of the term “cable network” as “a network that transmits signals via cables.” *Id.* We, however, declined to adopt additional language proposed by AT&T—namely, “rather than over the air”—because we were not persuaded that it is necessary to define the claim term “cable network” by inserting additional language of a negative limitation. *Id.*

In its Response, AT&T does not argue that our construction of the term “cable network” in the Institution Decision is unreasonable. PO Resp. 2. In its Reply, Cox states that Dr. Mir, its declarant, agrees and adopts our construction. Pet. Reply 1. Consequently, for purposes of this Final Written Decision, we see no need alter our construction of the term “cable network” as “a network that transmits signals via cables.”

B. The Level of Skill in the Art

In determining the level of skill in the art, various factors may be

considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962–63 (Fed. Cir. 1986)). In its Petition, Cox asserted that a person with ordinary skill in the art would be an individual who possesses “an undergraduate degree in computer science or electrical engineering and three to four years of experience in the field, or an equivalent combination of education and experience.” Pet. 12 (citing Ex. 1013 ¶¶ 26–30). AT&T’s declarant, Dr. Robert Akl, concurs with the view that a person of ordinary skill in the art would have the same qualifications as those identified by Cox. Ex. 2043 ¶ 32. We adopt and apply the level of ordinary skill in the art articulated by Cox and AT&T to our obviousness analysis in this proceeding. In addition, we note that the prior art of record in this proceeding—namely, Rasanen, Amit, and Liva—is indicative of the level of ordinary skill in the art. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579.

C. Obviousness of Claim 1 in View of Rasanen

In its Petition, Cox relied only upon Rasanen as the basis of the obviousness challenge for claim 1, although it characterized its contentions as “**Amit in view of Rasanen and Liva.**” Pet. 41–42. From the context of the claim chart, and given Cox’s sole reliance on Rasanen as the basis for its obviousness challenge to claim 1, we instituted trial on claim 1 on the ground of obviousness over Rasanen alone. Dec. on Inst. 10–12, 21.

In support of this asserted ground of unpatentability, Cox relies upon a detailed claim chart to explain how Rasanen teaches the recited subject matter of claim 1. Pet. 41–42. Cox also relies upon the Declaration (Ex. 1013) and Reply Declaration (Ex. 1027) of Dr. Mir to support its positions. In its Patent Owner Response, AT&T contends that Cox fails to demonstrate the obviousness of claim 1 because (1) Rasanen fails to disclose all the features of claim 1, including a “cable network,” “a plurality of RF channels,” and “connections to a plurality of users”; and (2) Cox fails to provide a sufficient rationale for modifying Rasanen. PO Resp. 8–27. AT&T relies upon the Declaration of Dr. Akl to support its positions. Ex. 2043.

We begin our analysis with a brief summary of Rasanen, and then address the arguments presented by the parties.

1. *Rasanen (Ex. 1006)*

Rasanen generally discloses a high-speed data transmission system that uses a mobile network to allocate parallel rate-adapted traffic channels to a high-speed user data signal. Ex. 1006, Abstract. Rasanen discloses that one of its objectives is to improve transmission rates for mobile networks. *Id.* at 1:33–34, 3:15–19. Rasanen discloses transmission of a “high-speed data signal DATAIN, which is to be transmitted over the radio path, [and] is divided in a divider 82 into a required number of lower-speed data signals.” *Id.* at 6:7–10, Fig. 2. These lower-speed data signals are separately subject to demodulation, deinterleaving, and channel decoding before being combined in the receiver into the original high-speed signal. *Id.* at 6:15–22, Fig. 2. Figure 2 of Rasanen is reproduced below.

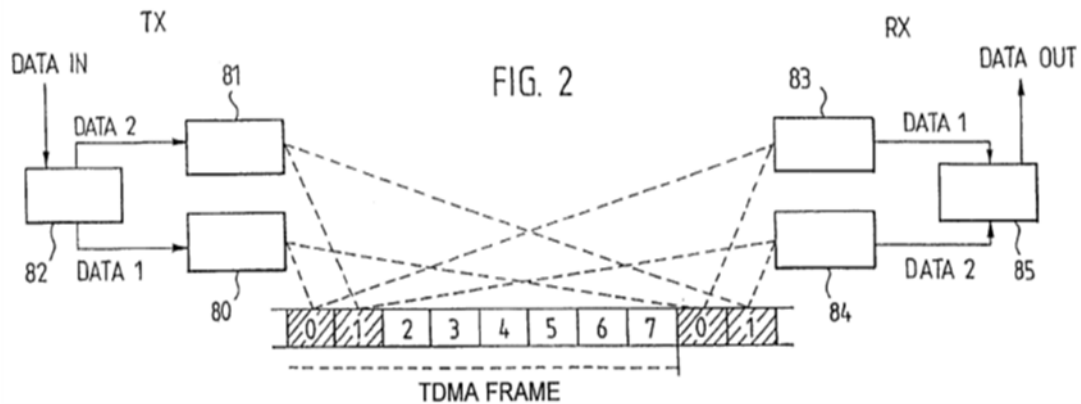


Figure 2 of Rasanen illustrates an embodiment of high speed transmissions based upon parallel traffic channels.
Ex. 1006, 4:56–57, 6:5–22.

2. Analysis of Obviousness of Claim 1 in View of Rasanen

In assessing obviousness, “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).² A party who petitions the Board for a determination of obviousness must show that “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)).

² Additionally, secondary considerations such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham*, 383 U.S. at 17–18. Here, AT&T has not presented any such evidence.

In its Petition, Cox refers to Rasanen's disclosure of a high-speed data transmission system that uses parallel channels, divides the high-speed data into lower-speed data streams, transmits them, and then recombines them into the original high-speed rate at the receiving end. Pet. 41–42. Cox acknowledges that Rasanen does not disclose transmission of the data streams over a cable network explicitly, but argues that the use of a cable network is implied based, in part, on Rasanen's disclosure that:

the procedure will be described . . . only as one way of carrying out high-speed data transmission, based on several parallel traffic channels, in a radio system. It should be noted, however, that the only matter essential for the invention is that a connection comprising several parallel traffic channels is established, and the invention itself relates to carrying out and synchronizing data transmission over such a connection.

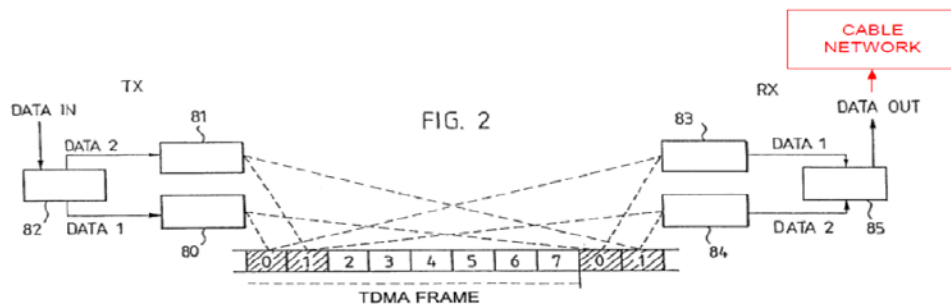
Pet. 41–42 (quoting Ex. 1006, 5:64–6:4).

In further support of the obviousness challenge, Dr. Mir states that Rasanen's disclosure suggests that the data transmission system can be adapted to different networking environments, and that one of ordinary skill in the art would have understood that “a digital mobile communication system can be part of a service provider network that extends its services over a cable network as a fixed network.” Ex. 1013 ¶ 74; *see also id.* at ¶ 82 (quoting Ex. 1006, 5:17–19 (“The basic concept of the present invention is, however, independent of the type of traffic channel and the multiple access method used.”)). Cox also contends that Rasanen's disclosure of several multiple access modulation techniques for facilitating communications, in which a large number of mobile users are present, teaches the claim element “wherein at least one of the RF channels has connections to a plurality of users.” Pet. 42 (citing Ex. 1006, 1:15–17).

AT&T and Cox dispute several facets of the obviousness challenge to claim 1 as discussed below.

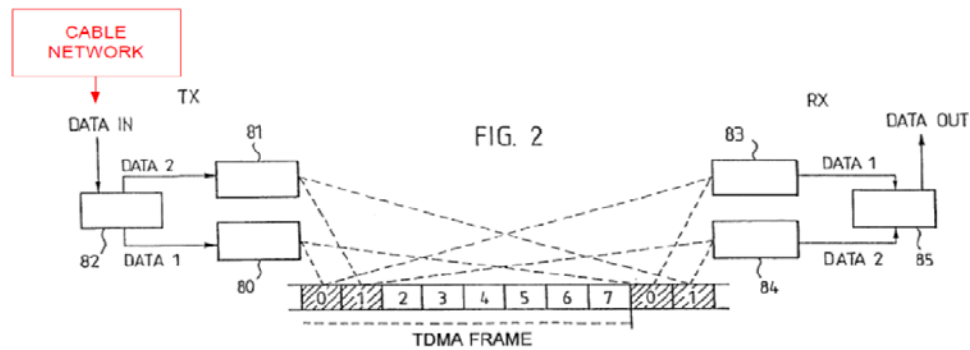
a. Rasanen's Alleged Disclosure of a "Cable Network"

AT&T argues that Rasanen does not disclose the step of "transmitting each of the multiple data streams over a cable network" recited in claim 1, because, as Cox repeatedly admits, Rasanen does not explicitly disclose a cable network. PO Resp. 8–13. AT&T disputes Dr. Mir's statement that "a digital mobile communication system can be part of a service provider network that *extends* its services over a cable network as a fixed network [so that] the receiving user can ultimately be *attached* to a cable network," because that proposed modification does not "transmit[] each of the multiple data streams over a cable network comprising a plurality of RF channels." *Id.* at 9–10 (emphasis omitted) (citing Ex. 1013 ¶ 74; Ex. 2043 ¶¶ 50–57). More specifically, AT&T alleges that, based on Dr. Mir's proposed modification to Rasanen, a cable network could be added as shown in AT&T-annotated versions of Figure 2 of Rasanen reproduced below:



Ex. 2044 (p. 1) (annotating Rasanen, FIG. 2)

The above illustrates a version of Figure 2 of Rasanen with annotations added by AT&T. See PO Resp. 11 (referring to Ex. 2044).



Ex. 2044 (p. 2) (annotating Rasanen, FIG. 2)

The above illustrates a version of Figure 2 of Rasanen with annotations added by AT&T. See PO Resp. 12 (referring to Ex. 2044).

With reference to annotated Figure 2 above, AT&T contends that under the modification of Rasanen's data transmission system proposed by Dr. Mir, the multiple data streams would be transmitted over Rasanen's wireless network. PO Resp. 10–11. AT&T further contends, however, that “only a single data stream is transmitted ‘over a cable network,’ not ‘multiple data streams’ as recited” in claim 1. *Id.* at 11 (citing Ex. 2043 ¶ 52). AT&T argues a “single data stream would be transmitted over a single RF channel of a cable network,” which “necessitate[s] only a cable network with a single RF channel, not necessarily a cable network ‘comprising a plurality of RF channels’ as recited” in claim 1. *Id.* at 11–12 (emphasis omitted) (citing Ex. 2043 ¶ 55).

In Reply, Cox emphasizes the deposition testimony of AT&T's expert, Dr. Akl, whom Cox alleges testified to the effect that: “in Figure 2 [of Rasanen], DATA1 is transmitted from channel decoder 83 to combiner 85 over a connection such as a cable,” “DATA2 is transmitted from channel decoder 84 to combiner 85 over a second cable connection,” and “[y]ou can have a wired cable connecting 83 to 85 and 84 to 85 and *based on the*

construction that would meet the cable network.” Pet. Reply 2–3 (citing Ex. 1026, 40:11–19, 41:7–10, 44:4–9). Cox argues that Dr. Akl effectively concedes that Rasanen “*does disclose a ‘cable network.’*” *Id.* Cox further asserts that Dr. Akl admits that the referenced portion of “Rasanen’s communication network, which transmits signal via cables, is a ‘cable network.’” *Id.* at 3–4 (emphasis omitted) (citing Ex. 1027 ¶ 10).

AT&T’s and Cox’s differing views as to whether Rasanen allegedly teaches or suggests a “cable network” as argued in the Petition are akin to ships passing in the night. AT&T views the use of the word “extends” in Dr. Mir’s testimony, cited in the Petition of “a service provider network that extends its services over a cable network,” as indicative of a “cable network” appended to the head or tail end of the entire Rasanen system. *See supra* (Ex. 2044, annotated versions, Fig. 2 of Rasanen (Ex. 1006)). On the other hand, Cox appears to assume—allegedly based on the testimony of Dr. Akl—that the recited “cable network” is the portion of the system transmitting DATA1 from channel decoder 83 to combiner 85 over a first cable, and transmitting DATA2 from channel decoder 84 to combiner 85 over a second cable connection on the receiving end in Figure 2 of Rasanen. Pet. Reply 3. Cox makes a similar assertion with a similar mapping for the transmission end of the system (*see* components 80, 81, and 82 of Figure 2). *Id.* at 3–4. Cox then argues that, based on the construction of a “cable network” set forth in the Institution Decision, it would “not prevent a wireless portion from cooperating with a ‘cable portion,’” and it would “not

disqualify the entire system from disclosing a ‘cable network.’” *Id.* at 4 (citing Ex. 1027 ¶ 11).³

At the oral hearing, Cox changed its position as to evidence it had submitted and relied upon in its Reply regarding this alleged cable mapping, stating that it no longer was relying on Dr. Akl’s testimony that some wires of Rasanen could be cables, so that this wiring fit within the definition of a “cable network.” *See* Tr. at 17:1–6 (“That’s not the issue”). Additionally, Cox’s underlying support for the argument is predicated on the incorrect notion that Dr. Akl admitted Rasanen discloses a “cable network.” Pet. Reply 2–3. Dr. Akl testified that the wiring at issue *can* be a “cable,” but contrary to Cox’s assertion, Dr. Akl does not state that Rasanen discloses this wiring *is* a “cable” or qualifies as the “cable *network*” recited in claim 1.⁴ Ex. 1026, 40:11–19, 41:7–10, 44:4–9.⁵ When asked directly whether

³ AT&T submits that we should not consider this issue because it is beyond the proper scope of a reply in that Cox previously argued that Rasanen did not explicitly require a cable system, and a reply “should not embark in a new direction with a new approach as compared to the position originally taken in the Petition.” PO Obj. 1–2 (citing Pet. 37, 41; *Apple Inc. v. E-Watch, Inc.*, IPR2015-00412, slip op. at 44 (PTAB May 6, 2016) (Paper 50)).

⁴ Reading Dr. Akl’s cited testimony in context, he repeatedly indicated that wiring could be cable, but stated that it is “not necessarily like a network on its own,” and “I would not consider it a network.” *See* Ex. 1026, 41:17–19, 42:4–6, 42:14–16, 43:11–17.

⁵ In his Reply Declaration, Dr. Mir states that, “although a wireless connection is described as a portion of an example of Rasanen’s communication network, cable networks also exist on both the transmit and receive sides of Rasanen’s communication network.” Ex. 1027 ¶ 11. Dr. Mir, perhaps, made this statement in light of Dr. Akl’s testimony, but as we explain above, we disagree with Cox’s interpretation of Dr. Akl’s testimony. *See id.* ¶¶ 9, 10. In any event, we do not afford Dr. Mir’s statement in this regard any weight, because Dr. Mir repeatedly confirmed his contrary view

cables connecting decoders 83 and 84 to combiner 85 would be considered a network that transmits signals via cables, Dr. Akl first answered, “[t]hat is not, that is exactly what I’m not sure if it could or it couldn’t, because it is just a wire.” *Id.* at 42:9–16. When pressed further, Dr. Akl answered, “I would not consider it a network [Y]ou can have a wire connecting 83 to 85. That is, that is all I’m saying.” *Id.* at 43:4–44:3. The cited cross-examination testimony of Dr. Akl is not sufficient to satisfy Cox’s burden of proving that Rasanen discloses a “cable network” as recited in claim 1 of the ’353 patent.

b. Replacement of Rasanen’s Wireless System with Amit’s Cable Network

At oral hearing, Cox also contends that the Amit reference should be considered as a “background reference” to demonstrate the knowledge one of ordinary skill in the art would bring to bear on reading Rasanen as teaching or fairly suggesting a “cable network,” even though this argument was not briefed by Cox. *See* Tr. 10:19–12:15. Cox contends that Amit should be considered because it has the “same architecture” as Rasanen. *Id.* at 11:14–12:15. Cox, further argues that a person of ordinary skill would have understood that the wireless system of Rasanen could have been replaced with a “cable network,” such as the cable network disclosed in Amit. *Id.* at 16:11–17:7; *see also id.* at 18:24–19:3.

AT&T asserts that we should not consider Cox’s argument regarding the substitution of Amit’s cable network into Rasanen’s wireless system

that Rasanen does not explicitly or inherently disclose a “cable network.” *See id.* ¶ 11; Ex. 1013 ¶ 74; Obs. 3–6 (Observations 2–7 (citing Ex. 2047, 28:12–17, 29:1–6, 29:13–30, 30:4–11, 31:11–16, 32:12–15, 33:10–12)).

because it is a new theory of unpatentability first raised by Cox at oral argument. Tr. 21:6–11.

The argument for replacing Rasanen’s wireless system with Amit’s cable network was raised by Cox for the first time at the oral hearing in connection with the “cable network” limitation in claim 1. Neither the Petition nor Cox’s Reply asserts a combination of Rasanen and Amit in the manner proposed in the challenge to claim 1 raised at the oral hearing, and trial was not instituted on this ground. See Pet. 41–42, Ex. 1013 ¶¶ 73, 74; Pet. Reply 2–11; Dec. on Inst. 10–12, 21. Therefore, we decline to consider Cox’s new argument of unpatentability with respect to the “cable network” limitation in claim 1. See *Dell Inc. v. Acceleron, LLC*, 818 F. 3d 1293, 1301 (Fed. Cir. 2016) (procedural rights of parties include prior notice and the opportunity to respond to arguments and evidence presented); see also *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,768 (Aug. 14, 2012) (“A party . . . may only present arguments relied upon in the papers previously submitted. No new evidence or arguments may be presented at the oral argument.”).

c. Rationale to Modify Rasanen

AT&T contends that Dr. Mir’s statement that Rasanen “suggests that the invention can be adapted to different networking environments” amounts to a bare assertion that falls short of qualifying as a sufficient rationale to modify the reference. PO Resp. 8–9. AT&T further argues that Dr. Mir’s statements, such as “*Rasanen* suggests that the invention can be adapted to different networking environments” or “a digital mobile communication system can be part of a service provider network that extends its services over a cable network as a fixed network” are conditional in nature. *Id.* at 13

(emphasis omitted) (citing Ex. 1013 ¶ 74). AT&T argues that, although modifications to Rasanen's data transmission system might have been possible, Dr. Mir has failed to provide a sufficient rationale demonstrating why a person of ordinary skill in the art would have made the requisite modifications to arrive at the claimed invention. *Id.* at 13–14. AT&T also contends that Dr. Mir's Declaration makes conclusory, unsupported assertions that do not explain why one of ordinary skill in the art would have been motivated to modify Rasanen in the manner proposed. *Id.* at 14–15. AT&T argues that Dr. Mir's opinions regarding Rasanen are based upon impermissible hindsight. *Id.*

Cox relies upon Rasanen's disclosure that describes its embodiments "only as one way of carrying out high-speed data transmission, based on several parallel traffic channels, in a radio system," and "the only matter essential for the invention is that a connection comprising several parallel traffic channels is established, and the invention itself relates to carrying out and synchronizing data transmission over such a connection." Pet. 41–42 (citing Ex. 1006, 5:64–67, 6:1–4). Cox asserts that Rasanen's invention can be applied to "any communication network 'comprising several parallel traffic channels'" and, therefore, a person of ordinary skill in the art would have understood that any communication network can include a "cable network." Pet. Reply 5 (citing Ex. 1013 ¶ 57, 74, 75; Ex. 1006, 4:16–22; Ex. 1027 ¶ 7).

AT&T, however, correctly points out that Cox's declarant, Dr. Mir, makes conditional statements that adaptations and modifications to Rasanen's digital mobile communications system to include a cable network "can" be made. Ex. 1013 ¶ 74 (emphasis added). Merely stating that a

cable network *can* or *could* be included in Rasanen's digital mobile communication system does not make it obvious. What is lacking here is a convincing rationale and supporting evidence as to why one of ordinary skill in the art would have modified Rasanen's system to include specifically a cable network, for example, by substituting a cable network for Rasanen's wireless transmission system or, for that matter, by using cable networks in specific portions of Rasanen's system. As the Federal Circuit has explained, "obviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention." *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015); *see also KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007) (stating that it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does").

In its Reply, Cox presents essentially the same issue by arguing that a person of ordinary skill in the art would have understood Rasanen's teachings as implementing transmissions on a variety of communications networks, with Dr. Mir stating that Rasanen's invention "can be adapted" to different networking environments and "Rasanen provides teaching for the implementation . . . on a cable network." Pet. Reply 5; Ex. 1027 ¶ 7. But this argument suffers from the same deficiencies noted above—namely, it avoids addressing the question of why one of skill in the art would have opted to include a cable network in Rasanen's digital mobile communication system. Absent such a reasoned explanation or supporting evidence, we conclude that Cox fails to demonstrate by a preponderance of the evidence

that a person of ordinary skill in the art would have been motivated to use a cable network in Rasanen's high-speed data transmission system.

d. Conclusion

For the reasons given above, we determine Cox has not demonstrated by a preponderance of the evidence that the subject matter of claim 1 would have been obvious to one of ordinary skill in the art over Rasanen.

3. Analysis of Obviousness of Claims 2–29

We instituted trial on the grounds that claims 2–12, 15–26, and 28 are unpatentable under 35 U.S.C. § 103(a) over Amit and Rasanen; and claims 13, 14, 27, and 29 are unpatentable over Amit, Liva, and Rasanen. As we explained previously, claims 2–29 depend directly or indirectly from claim 1. Ex. 1001, 12:23–14:15. As applied by Cox, neither Amit nor Liva remedies the deficiencies in Rasanen discussed above regarding the “cable network” limitation in claim 1. *See* Pet. 41–42; Pet. Reply 2–11. In light of Cox's failure to demonstrate by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Rasanen, by virtue of their dependencies from independent claim 1, Cox also fails to demonstrate by a preponderance of the evidence that the subject matter of dependent claims 2–29 would have been obvious over the combination of Rasanen and either Amit and/or Liva.

D. AT&T's Motion To Exclude

AT&T's Motion to Exclude seeks to exclude Exhibits 1005 and 1008–1012, which are all exhibits filed by Cox with its Petition. Mot. to Exclude 1–7. Cox submits that the Motion to Exclude should be denied because the exhibits are irrelevant as they are not within the scope of materials for the grounds that trial was instituted upon. Opp. to Mot. Exclude 1–2. We,

however, did not reference or rely upon these Exhibits in reaching our final decision. Accordingly, we dismiss Motion to Exclude Exhibits 1005 and 1008–1012 as moot.

E. AT&T's Motion for Observations

To the extent AT&T's Motion for Observation pertains to testimony purportedly impacting Dr. Mir's credibility, we have considered AT&T's Motion for Observations and Cox's Responses in rendering this Final Written Decision, and have accorded Dr. Mir's testimony appropriate weight where necessary. *See* Obs. 2–7; Obs. Resp. 1–4.

III. CONCLUSION

For the foregoing reasons, Cox has not demonstrated by a preponderance of the evidence that claim 1 of the '353 patent is unpatentable under 35 U.S.C. § 103(a) over Rasanen; claims 2–12, 15–26, and 28 of the '353 patent are unpatentable under 35 U.S.C. § 103(a) over Amit and Rasanen; or claims 13, 14, 27, and 29 are unpatentable under 35 U.S.C. § 103(a) over Amit, Liva, and Rasanen.

IV. ORDER

In consideration of the foregoing, it is
ORDERED that Cox has not demonstrated that claims 1–29 of the '353 patent are unpatentable;
FURTHER ORDERED that AT&T's Motion to Exclude is *dismissed* as moot; and

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

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