

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESIMEDIA LLC,
Petitioner,

v.

BOXCAST INC.,
Patent Owner.

IPR2022-00067
Patent 10,154,317 B2

Before GEORGIANNA W. BRADEN, MICHAEL T. CYGAN, and
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

CYGAN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Granting Petitioner's Motion to Strike
Denying Patent Owner's Motion to Exclude
35 U.S.C. § 318(a)

I. INTRODUCTION

Resi Media, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of *inter partes* review of claims 1–36 of U.S. Patent No. 10,154,317 B2 (Ex. 1003, “the ’317 patent”). BoxCast Inc. (“Patent Owner”) filed a Preliminary Response. Paper 7. On April 26, 2022, we instituted trial on all claims and all of the asserted grounds of unpatentability. Paper 16. Patent Owner filed a Response. Paper 27 (“Resp.”). Petitioner filed a Reply. Paper 33 (“Reply”). Patent Owner filed a Sur-Reply. Paper 39 (“Sur-Reply”). Oral argument was held on January 25, 2023, and a transcript of the oral argument is included in the record. Paper 55 (“Tr.”).

Patent Owner filed a Motion to Exclude. Paper 44 (“Mot. Exclude”). Petitioner filed an Opposition (Paper 46, “Opp. Mot. Exclude”), and Patent Owner filed a Reply (Paper 51, “Reply Mot. Exclude”). We address Patent Owner’s Motion in this Decision.

Petitioner filed a Motion to Strike exhibits and arguments submitted by Patent Owner in its Sur-Reply. Paper 42 (“Mot. Strike”). Patent Owner filed an Opposition (Paper 46, “Opp. Mot. Strike”), and Petitioner filed a Reply (Paper 50, “Reply Mot. Strike”). We address Petitioner’s Motion in this Decision.

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–36 of the ’317 patent. For the reasons we identify below, we determine that Petitioner *has shown* based on a preponderance of evidence that claims 1–36 are unpatentable.

II. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies Resi Media LLC (Petitioner), Pushpay Holdings Limited, and Pushpay, Inc. as the real-parties-in-interest. Pet. 1; Paper 6, 2. Patent Owner identifies itself, BoxCast Inc., as the real party-in-interest. Paper 4, 2.

B. Related Proceedings

The parties identify the following litigation that involves the patent at issue: *BoxCast Inc. v. Resi Media LLC, PushPay, Inc. and PushPay Holdings Ltd.*, 2:21-cv-00217-JRG (E.D. Tex.). Paper 4, 2; Paper 6, 2. Patent Owner also asserts that a petition for *inter partes* review of U.S. Patent 9,686,574 B2, having similar subject matter, has also been filed by the same Petitioner in IPR2022-00066. *See* Paper 6, 2.

C. The '317 Patent (Ex. 1003)

The '317 patent is titled "System, Method, and Protocol for Transmission of Video and Audio Data." Ex. 1003, code (54). The '317 patent issued from Application Serial No. 15/637,160, filed on June 29, 2017, and claims priority to Provisional Application No. 62/358,214, filed on July 5, 2016. *Id.* at codes (21), (22), (60).

The '317 patent relates to an improved backhaul protocol for the transmission of video and audio data. Ex. 1003, 1:18–20. Computer implemented systems and methods have provided for the autonomous broadcasting of video and audio data during an event, with the broadcasting being scheduled in advance from a remote location over a network. *Id.* at 1:24–30. Conventional protocols for sending data over the network result in packet loss due to insufficient bandwidth and temporary congestion along

the backhaul path. *Id.* at 1:48–51. Furthermore, protocols such as Real-Time Transport Protocol (“RTP”) over User Datagram Protocol (“UDP”) leave the network vulnerable to spoofing of streamed content. *Id.* at 2:4–11. To address these issues, the ’317 patent uses an improved backhaul protocol, and encompasses procedures for remotely scheduling autonomous broadcasting of video and audio data in advance. *Id.* at 2:20–28.

In an exemplary method of broadcasting, an autonomous broadcast device (“ABD”) is situated behind a firewall that prevents access to the ABD from outside the firewall. *Id.* at 2:29–35. The ABD issues a request via the Internet to download a schedule from a scheduler web site, determines a start time for an event from the schedule, receives digital content from a recording device near the event, transmits streaming parameters to the scheduler web site, and transmits the digital content to at least one server. *Id.* at 2:35–49. Pursuant to its scheduling rules, the ABD powers on the recording device and begins uploading a secure live stream to the media servers, which provide the stream to viewers. *Id.* at 22:33–41. All of the ABD’s actions are performed without any modification to or circumvention of the firewall. *Id.* at 2:35–36.

Furthermore, the transmission of the digital content may be via a backhaul protocol that transports the digital content using a plurality of packets, at least one of the packets comprising encrypted data corresponding to a portion of the digital content, and at least one of the packets comprises error correction information. *Id.* at 3:52–57. The protocol sends encrypted data packets over UDP to the media server. *Id.* at 11:20–23. The protocol also initiates a TCP (“transport control protocol”) connection to the media server that is used to receive packet acknowledgements and send

retransmitted packets if the stream originator determines that a packet is not received by the server. *Id.* at 11:24–36.

D. Illustrative Claim

Claim 1 is reproduced below:¹

1. [1.0] A method comprising:

[1.1] situating an autonomous broadcast device (ABD) behind a router; and

[1.2] establishing an Internet connection for the ABD behind the router, wherein the router prevents remote access to the ABD from outside the router,

[1.3] wherein the ABD autonomously performs the following actions without any modification to or circumvention of the router:

[1.4] issue a request via the Internet connection to a first server situated outside the router and receive data relating to a recording start time of a live event from the first server in response to the request;

[1.5] receive digital content of the live event after the recording start time from a digital recording device proximate to the live event;

[1.6] transmit streaming information via the Internet connection to a second server, wherein the second server is configured to stream the digital content to a plurality of users;

[1.7] transmit the digital content via the Internet connection to the second server contemporaneously with the live event and based on the data relating to the recording start time;

¹ Reference numbers added by Petitioner (Ex. 1025) appear in brackets. Such annotations are used as a guide and do not impact our analysis.

[1.8] receive data relating to a recording end time for the live event from the first server via the Internet connection; and

[1.9] cease transmission of the digital content based on the data relating to the recording end time,

[1.10] wherein the digital content is transmitted to the second server according to a first protocol,

[1.11] wherein the first protocol defines an encryption scheme for the digital content; and

[1.12] wherein the first protocol defines an error correction scheme for the digital content.

Ex. 1003, 38:27–62. Claims 2–10 depend from claim 1. *Id.* at 38:63–39:40. Independent claims 11, 21, and 29 recite, respectively, a method, system, and method having limitations similar to that of claim 1. *Id.* at 39:41–40:2, 40:51–41:11, 41:50–42:17. Claims 12–20 depend from claim 11; claims 22–28 depend from claim 21; claims 30–36 depend from claim 29. *Id.* at 40:3–40:50, 41:12–41:49, 42:18–42:56.

E. The Asserted Challenges to Patentability and Evidence of Record

Petitioner asserts that claims 1–36 would have been unpatentable on the following challenges:²

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 11–14, 21, 22, 29, 30	103	Morford ³ , Maes ⁴

² For purposes of this Decision, we assume the claims at issue have an effective filing date later than March 16, 2013, the effective date of certain amendments in the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), and we apply the AIA versions of 35 U.S.C. §§ 102 and 103.

³ US 9,769,368 B1, issued Sept. 19, 2017 (Ex. 1020).

⁴ US 2006/0041431 A1, issued Feb. 23, 2006 (Ex. 1009).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
5, 6, 15, 16, 23, 24, 31, 32	103	Morford, Maes, Lu ⁵
7, 17, 25, 33	103	Morford, Maes, McGrew ⁶
8–10, 18–20, 26–28, 34–36	103	Morford, Maes, Barreto ⁷
1–4, 11–14, 21, 22, 29, 30	103	Allen ⁸ , Maes, Horowitz ⁹
5, 6, 15, 16, 23, 24, 31, 32	103	Allen, Maes, Horowitz, Lu
7, 17, 25, 33	103	Allen, Maes, Horowitz, McGrew
8–10, 18–20, 26–28, 34–36	103	Allen, Maes, Horowitz, Barreto

Pet. 4. Petitioner supports its Petition with a Declaration by Dr. William Easttom. Ex. 1007. Dr. Easttom also presents a further Declaration in support of Petitioner’s Reply. Ex. 1056.

Patent Owner supports its arguments with Declarations by Dr. Robert Akl. Exs. 2017, 2054.

III. ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe a patent claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b).” 37 C.F.R. § 42.100(b) (2019). Under this standard, the words of a claim generally are given their “ordinary and customary meaning,” which is the meaning the term would have to a

⁵ US 2012/0300663 A1, published Nov. 29, 2012 (Ex. 1021).

⁶ US 8,300,824 B1, issued Oct. 30, 2012 (Ex. 1022).

⁷ US 8,654,787 B2, issued Feb. 18, 2014 (Ex. 1023).

⁸ WO 2008/011380 A2, published Jan. 24, 2008 (Ex. 1008).

⁹ US 2004/0078817 A1, published Apr. 22, 2004 (Ex. 1010).

person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner provides constructions of nine terms or phrases. Pet. 10–17. Patent Owner argues against two of those constructions. Resp. 18–26. Construction is needed only for those terms “that are in controversy, and only to the extent necessary to resolve the controversy.” *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). With respect to the terms “scheduling logic,” “streaming information,” “contemporaneously with the live event,” “eBC-0,” “eBC-x16,” “1-dimensional XOR scheme,” and “fBC-X1d,” these terms are not in controversy. Thus, we need not construe those terms.

With respect to the term “autonomous broadcast[ing] device” (“ABD”), Petitioner argues that it should be construed as a means-plus-function term under 35 U.S.C. § 112(f). Pet. 10 (emphasis omitted). Petitioner’s ultimate construction is “a device [capable] of broadcasting video and audio content” that is “capable of acting without user intervention.” *Id.* at 11.

Patent Owner argues that the claimed ABD must have a processor that is optimized for video and audio compression. Resp. 18. Patent Owner argues that the ’317 patent provides a “repeated and consistent” description of the ABD as being optimized for video and audio compression. *Id.* at 19 (citing *Groove Digital, Inc. v. United Bank*, 825 Fed. Appx 852, 856 (Fed. Cir. 2020)). Patent Owner relies on two statements from the patent to support this contention; namely, that “[t]he commissioning process involves

adding software onto a processor representing broadcasting hardware to form *a device capable of transmitting live video data to a server*,” and “[a] minimum configuration for the broadcasting device 208 processor system includes a processor (e.g., the DM365 processor and/or some other *processor optimized for video and audio compression*).” *Id.* (citing Ex. 1001, 5:61–65, 9:9–12). Patent Owner argues that the claimed ABD provides many advantages over the use of a general-purpose computer, such as a smaller footprint, lower cost, better reliability, lower power consumption, and lower chance of manipulation of the data. *Id.* at 20 (citing Ex. 1001, 9:21–53). Patent Owner also argues that, even under Petitioner’s proposed construction, the ABD must have a processor optimized for video and audio compression. *Id.* at 21–22.

Petitioner argues that the cited examples in the Specification are non-limiting, and that the two statements relied upon by Patent Owner do not narrow the more general description found in the Specification, of processor 106 that “includes, but is not limited to, any programmed or programmable electronic device or coordinated devices that can store, retrieve, and process data and may be a processing unit or in a distributed processing configuration.” Reply 10 (citing Ex. 1001, 7:60–64, Fig. 1).

With respect to the claimed ABD, we determine that even under Patent Owner’s construction requiring a “processor optimized for audio and video compression,” Petitioner has shown that the independent claims would have been obvious over Morford and Maes.¹⁰ Therefore, we need not construe the term to resolve the obviousness contentions at issue.

¹⁰ To the extent Patent Owner argues that this term includes additional requirements, such as “sufficient power to provide quality livestreaming”

With respect to the phrase “without modification or circumvention of the router” in claim 1, and similar phrases in claims 11, 21, and 29, Petitioner proposes a construction of “using communication protocol(s) that enable communication through the router.” Pet. 11. Petitioner relies on language in the Specification relating the claimed phrase to the use of the ABD to initiate communication with the server. *Id.* at 12 (citing Ex. 1003, 27:63–28:22, 30:44–54). Petitioner further relies on statements of the Patent Owner concerning that term in unrelated district court proceedings on the parent patent. *Id.* (citing Ex. 1017, 7) (“Specifically, the broadcasting device sends frequent requests to the scheduler website Accordingly, all communications from the scheduler website to the broadcasting device are replies (not unsolicited) which will allow them to pass through a router or firewall unabated.”). Petitioner also points to extrinsic evidence to show that a person of ordinary skill would have known that routers and firewalls “were ubiquitous and certain communications protocol(s) could enable transmissions to pass through (*i.e.*, not circumvent) a router/firewall without modifying the router/firewall.” *Id.* (citing Ex. 1007 ¶¶ 52–55, 188; Exs. 1015, 1016, 1036–1041).

Patent Owner argues that “modification” would include techniques, such as port forwarding, that change settings on the router. Resp. 23 n.9 (citing Ex. 2017 ¶¶ 49–50), 16 (citing Ex. 1001, 1:37–43). Patent Owner

(Sur-Reply 16–17; Tr. 53:8–14), Patent Owner failed to timely advocate such a construction in its Patent Owner Response. *See* PO Resp. 16–20 (arguing that the processor must be “optimized” for compression and distinguishing a general purpose processor); *see also* Paper 18 (Scheduling Order), 9 (cautioning Patent Owner that “arguments not raised in the response may be deemed waived”)

further argues that “circumvention” would include external networking techniques such as a Virtual Private Network (“VPN”) or a DeMilitarized Zone (“DMZ”). *Id.* at 16 (citing Ex. 1001, 1:43–46), 17 (citing Ex. 1001, 1:58–2:2). Patent Owner characterizes the effect of either circumvention or modification as “allow[ing] communications from outside the router to reach the ABD that would otherwise be blocked because of the router’s NAT [network address translation] functionality.” *Id.* at 23. Patent Owner further characterizes a “hidden ABD problem,” in which a “scheduling server cannot reach the ABD behind a router because the scheduling server knows only the WAN IP [Wide Area Network Internet Protocol] (public address) of the ABD’s network and cannot reach the private address of the ABD itself.” *Id.*

Petitioner argues that Patent Owner’s construction is unclear as to when such router settings may not be changed, and what settings an unchanged router may or may not contain. Reply 12–14. Petitioner argues that the claim, at most, would prohibit changing router settings during the performance of the claimed steps, but would not restrict changing settings prior to performance of the claimed method. *Id.*

Patent Owner clarifies its construction as requiring “only that the router not be circumvented or modified for the purpose of permitting a server to communicate over the internet with an ABD behind the router.” Sur-reply 5–6.

Based on the evidence of record, we present the following construction of the phrase “without modification or circumvention of the router.” We begin with the language of the claims and the originally-filed disclosure. With respect to the originally-filed disclosure of the ’317 patent,

including material incorporated by reference to the '574 patent, no explicit discussion is presented to define or explain the terms “modification” or “circumvention.”

With respect to the claims, the “without modification to or circumvention of” is a limitation to specific steps or configurations, not to the entirety of the claimed method (for method claims 1–20) or system (for system claims 21–36). Using claim 1 as an example, the ABD must, “without any modification to or circumvention of the router . . . receive data . . . from the first server.” Ex. 1003, 38:34–36, 38:42–54. However, claim 1 also requires “establishing an Internet connection for the ABD behind the router” in which the “router prevents remote access to the ABD from outside the router.” *Id.* at 38:31–33. Clearly, the router cannot simultaneously prevent (all) remote access to the ABD from outside the router and also permit the first server to send data to the ABD. But the claim limits these two actions to the individual steps in which they appear. Only during the “establishing an Internet connection” step is the router required to “prevent remote access to the ABD.” And only the six stated autonomous ABD actions are required to be performed “without modification or circumvention of the router.”

With respect to the scope of “without modification or circumvention of the router” during the six claimed actions, the '317 patent provides examples of permissible and impermissible activity. For example, actions/configurations such as pre-registration of the ABD with the scheduling logic of the content provider are permitted in view of the '317 patent's description that “[p]rior to shipping each broadcasting device 908

. . . the scheduling logic [at the remote server 904] receives a record for that broadcasting device with its secret password.” Ex. 1003, 29:42–60.

As for impermissible actions, the ’574 patent describes altering the router’s settings, such as by port forwarding, or establishing an external network, such as by placing the ABD in a DMZ or installing a VPN server, as attempts to address problems due caused by ABDs not being able to be controlled remotely when placed behind a user’s firewall. Ex. 1001, 1:33–2:2. We agree with Patent Owner’s characterization of these as actions that would modify or circumvent the router.

Patent Owner argues that modification and certification should be understood as viewed by a person having ordinary skill in the art at the time of the invention, yet also in recognition of the desirability of designing a system for the lower knowledge of networking held by a “typical consumer,” which is described as part of the solution provided by the ’574 patent. Resp. 10, 14, 25. The ’317 patent is directed not towards a “typical consumer,” but toward “an unmet need for an improved backhaul protocol for the transmission of video and audio data.” Ex. 1003, 2:13–16. Therefore, we interpret the claim language in light of one having ordinary skill in the art, and do not further limit the claims by the ability of a typical user.

Accordingly, we construe the phrase “without modification or circumvention of the router” to be a limitation to specific steps or configurations during (1) the “establishing an Internet connection” step so the router will “prevent remote access to the ABD” and (2) the six stated autonomous ABD actions. Actions altering the router’s settings, such as by port forwarding, or establishing an external network, such as by placing the

ABD in a DMZ or installing a VPN server, constitute prohibited modification and/or circumvention of a router.

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, “would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of non-obviousness.¹¹ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

In an *inter partes* review, the petitioner must show with particularity why each challenged claim is unpatentable. *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016); 37 C.F.R. § 42.104(b). The burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

C. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art;

¹¹ Neither party presents evidence or arguments regarding objective evidence of non-obviousness.

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) (quotation marks omitted). Furthermore, the prior art itself can reflect the appropriate level of ordinary skill in the art. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Here, Petitioner asserts,

A POSITA in July 2016 would have had at least (1) a master’s degree (or equivalent course work) in computer science, computer engineering, or electrical engineering, and two years’ experience in networked systems or applications, or at least (2) a bachelor’s degree in computer science, computer engineering, or electrical engineering, and four years’ experience in networked systems or applications, or the equivalent, which would include experience in network programming.

Pet. 4–5 (citing Ex. 1007 ¶ 30).

Patent Owner asserts that the parties agree that a person of ordinary skill in the art of the ’317 patent

would have . . . a Bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and 2–3 years of experience in the design or development of telecommunication and networked systems, or the equivalent.

Resp. 14 n.5 (citing Ex. 1007 ¶ 28; Ex. 2017 ¶ 35).

For purposes of this Decision, we do not determine that the differences between the proffered levels of ordinary skill in the art would be dispositive. We adopt our determination in the Institution Decision, in which we adopt the parties’ asserted level having between two to four years of experience. Inst. Dec. 20.

D. Alleged Obviousness over Morford and Maes

Petitioner asserts that claims 1–4, 11–14, 21, 22, 29, and 30 would have been obvious under § 103 over Morford and Maes. Pet. 36–67.

Upon consideration of Petitioner’s explanations and supporting evidence in this current record, and Patent Owner’s arguments to the contrary, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–4, 11–14, 21, 22, 29, and 30 are unpatentable under § 103 as obvious over Morford and Maes.

1. Overview of Morford (Ex. 1020)

Morford is a U.S. Patent, filed on September 25, 2014, issued on September 19, 2017, and titled “Remote Video System.” Ex. 1020, codes (12), (45), (54). Morford describes a remote video system that includes a camera device connected to a processor configured for video capture and transmission. Ex. 1020, 2:41–47. The camera connects over a network to a server, which includes a computing device storing instructions for data receipt, storage, and transmission, and may include a local network server to store and manage settings information or accounts. *Id.* at 2:51–63. Users may download an application on their device to access the video content on or through the servers. *Id.* at 3:11–18. Figure 3 illustrates one disclosed embodiment:

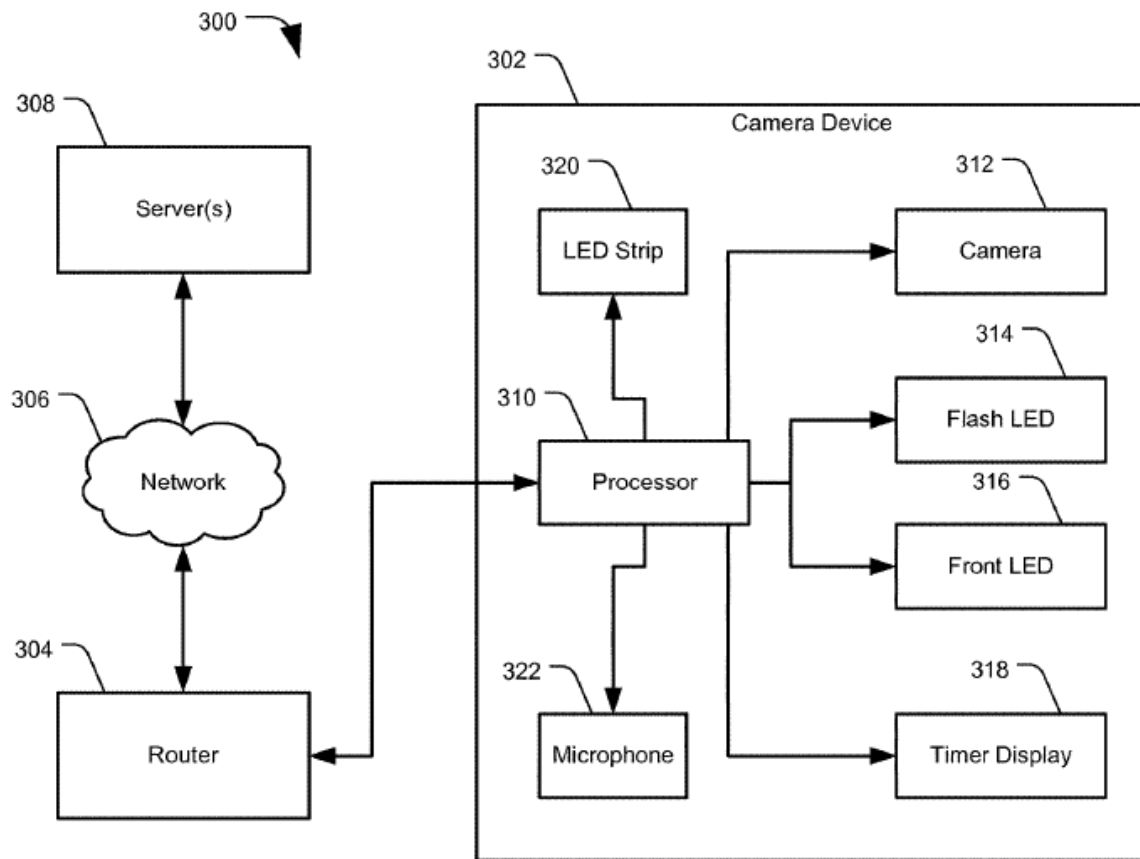


FIG. 3

Figure 3 portrays camera device 302, which includes camera 312, LEDs 314, 316, 320, timer display 318, microphone 322, and processor 310, wherein camera 302 is connected to router 304, which communicates through network 306 to servers 308.

2. *Overview of Maes (Ex. 1009)*

Maes is a U.S. Patent Publication, published on February 23, 2006, titled “Conversational Networking via Transport, Coding, and Control Conversational Protocols.” Ex. 1009, codes (12), (43), (54). Maes discloses a system and method for implementing conversational protocols for distributed conversational networking architectures and/or distributed

conversational applications, as well as real-time conversational computing between network-connected pervasive computing devices and/or servers over a computer network. *Id.* at code (57). According to Maes, the conversational protocols are for implementing DSR (distributed speech recognition) applications over a network. *Id.* ¶ 3. Maes specifically discloses streaming digital content (audio/video) to a server using a protocol such as Real-Time Transport Protocol (RTP). *Id.* ¶¶ 125, 159, 207.

One embodiment of Maes is illustrated in Figure 9, reproduced below.

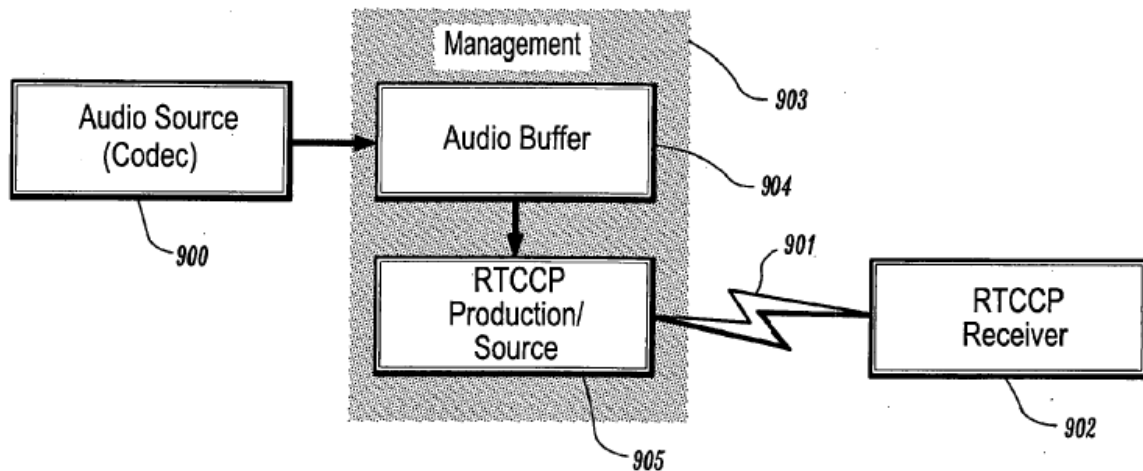


FIG. 9

Figure 9 illustrates a diagram of a system for generating a Real Time Conversational Coding Protocol (“RTCCP”) data stream. *Id.* ¶ 31.

According to Maes, audio source (codec) 900 generates audio/speech data to be transmitted over network 901 to receiver 902. *Id.* ¶ 138. The transmitter comprises system manager 903, which manages an audio buffer and RTCCP generator 905. *Id.*

Another embodiment of Maes is illustrated in Figure 22, reproduced below.

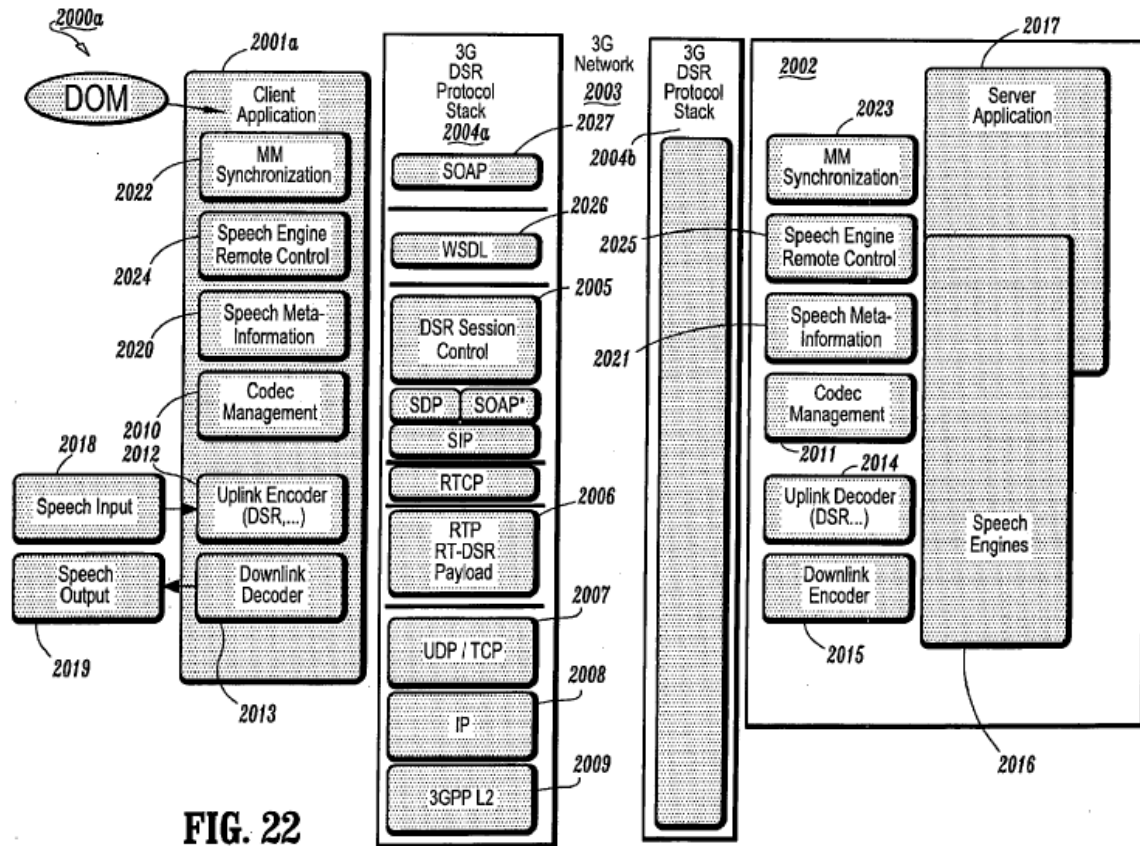


FIG. 22

Figure 22 of Maes shows an SDR system that supports multi-modal synchronization modules 2022 (client) and 2023 (server) for managing the meta-information that enables synchronization of different views (speech, GUI) of a multi-modal browser application 2001a (e.g., multi-modal DOM-based browser). *Id.* ¶ 305. Maes also teaches use of speech engine remote control modules 2024 (client) and 2025 (server) for managing meta-information that enables remote control of conversational engines 2016. *Id.*

Maes discloses that audio (speech input 2018) is encoded according to particular encoding scheme, e.g., preferably a DSR optimized codec (e.g. Reco VC), or any other suitable scheme. *Id.* ¶ 306. According to Maes, the encoded data (e.g., DSR data) is transported on the network transport layers via RTP (RT-DSR payload). In addition, codec description, negotiation,

dynamic switches and setup is preferably exchanged via SDP over SIP or SOAP over SIP. *Id.*

Another embodiment of Maes is illustrated in Figure 28, reproduced below.

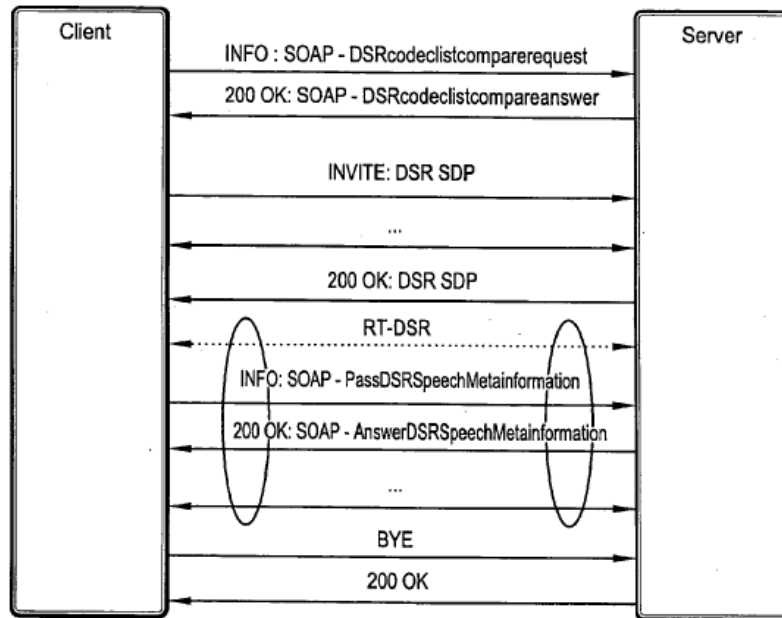


FIG. 28

Figure 28 of Maes shows SDR session exchanges associated with a SOAP/SIP session where the BYE and dynamic codec switches are symbolically in the last set of changes. *Id.* ¶ 307. SOAP provides a mechanism for information exchange using HTTP and XML to provide communications between systems in a network. *Id.*

3. *Claim 1*

a) *Petitioner's assertions*

Petitioner asserts that the combination of Morford and Maes teaches or suggests all of the limitations recited in claim 1. Pet. 19–29.

[1.0] A method comprising

Petitioner asserts that this claim language is met by descriptions of methods for capturing and streaming digital content in both Morford and Maes. Pet. 39.

[1.1] situating an autonomous broadcast device (ABD) behind a router

Petitioner asserts that the ABD is taught by Morford's camera device, for example, camera device 302. Pet. 39 (citing Ex. 1020, 6:53–61, 14:1–8, Figs. 3, 7; Ex. 1007 ¶¶ 423–424). Petitioner further asserts that the camera device is situated behind a router because it “start[s] streaming automatically” and “send[s] and receive[s] data through a router 304 connected to the network 306, such as an internet.” *Id.* at 40 (citing Ex. 1020, 6:53–61, 9:13–17; Ex. 1007 ¶¶ 423–426). Petitioner further asserts that the router may be external, and the router may include a firewall, and Morford describes that its camera device can “be located behind a firewall and still communicate with servers.” *Id.* (citing Ex. 1020, 9:30–35, 14:1–8; Ex. 1007 ¶ 427).

[1.2] “establishing an Internet connection for the ABD behind the router, wherein the router prevents remote access to the ABD from outside the router”

Petitioner asserts that this limitation is met by Morford's communication over “an internet connection” between camera device “through a router” and servers. Pet. 41 (citing Ex. 1020, 2:54–58, 6:53–61). Petitioner asserts that Morford's camera device can “‘be located behind a firewall and still communicate with servers,’ indicating that the router includes a firewall and the router/firewall prevents remote access.” *Id.* (citing Ex. 1020, 9:30–35, 14:1–8; Ex. 1007 ¶¶ 428–429).

With respect to the router preventing remote access, Petitioner points to Maes' statement that "tunneling through firewalls and wireless gateways may not always be guaranteed." Pet. 41 (citing Ex. 1009 ¶ 229). Petitioner also relies upon its declarant's statement that modems/routers typically included a firewall to act as a barrier between an internal network and an external network. *Id.* at 19 (citing Ex. 1007 ¶ 64). Petitioner asserts that Morford discloses a router preventing remote access, and alternatively, use of such conventional firewall functionalities in Morford's router would require only ordinary skill and produce predictable results. *Id.* at 41 (citing Ex. 1007 ¶¶ 431–432).

[1.3] "wherein the ABD autonomously performs the following actions without any modification to or circumvention of the router:"

Petitioner points to the automatic push communication of Morford's camera devices, in which "the camera may provide the data of the transmission, and may initiate the transmission rather without first receiving a request from a receiver server or client," as teaching the claimed autonomous performance by the ABD. Pet. 44 (quoting Ex. 1020, 22:4–14) (emphasis omitted).

Petitioner further points to Morford's description that the "automatic push configuration may allow camera device 502 to be located behind a firewall and still communicate with servers," such that there is "no need for configuration at a router." *Id.* at 45 (quoting Ex. 1020, 9:30–33, 10:9–13); *see also* Petitioner's discussion of limitations 1.4–1.9.

Petitioner further asserts, citing Maes and its declarant, that request protocols may pass unhindered through unmodified and uncircumvented firewalls. Pet. 45 (citing Ex. 1009 ¶¶ 229, 232; Ex. 1007 ¶¶ 442–44).

Petitioner characterizes this as “a basic foundation of Internet communications.” *Id.* (citing Ex. 1007 ¶¶ 71, 74, 442).

[1.4] “issue a request via the Internet connection to a first server situated outside the router and receive data relating to a recording start time of a live event from the first server in response to the request”

Petitioner asserts that Morford’s camera devices “check for streaming start and stop times . . . by consulting information stored at the remote video server,” including for live events, wherein the start and stop times determine when recording occurs. Pet. 46 (citing Ex. 1020, 9:28–45, 10:9–13, 16:63–67, 22:4–21). Petitioner asserts that this does not require router or firewall circumvention because the camera device may communicate with servers through a firewall “without forwarding the camera device’s IP [Internet Protocol address] to the server.” *Id.* at 47 (citing Ex. 1020, 9:31–33, 22:4–21).

[1.5] “receive digital content of the live event after the recording start time from a digital recording device proximate to the live event”

Petitioner asserts that Morford’s camera device receives digital content from a “camera element” and/or a microphone. Pet. 48 (citing Ex. 1020, 6:26–33, 7:1–4; Figs. 2–3). Petitioner asserts that Morford’s camera device captures image data if the current time is “within a valid image capture time frame.” *Id.* (citing Ex. 1020, 4:26–30, 16:57–67; Ex. 1007 ¶¶ 452–453). Petitioner asserts that this does not require router or firewall circumvention because the camera device and camera element/microphone are both located behind the same router. *Id.* (citing Ex. 1007 ¶ 453).

[1.6] “transmit streaming information via the Internet connection to a second server, wherein the second server is configured to stream the digital content to a plurality of users”

Petitioner asserts that Maes teaches that a client device sends streaming information, in the form of session descriptions in SDP format, to a server. Pet. 49–50 (citing Ex. 10009 ¶¶ 125, 203–207). Petitioner asserts that Morford also teaches providing an SDP file to a server, and a second (media) server that provides access to live video streams in real time. *Id.* at 49, 51 (citing Ex. 1020, 3:42–46, 6:63–65, 8:65–9:5). Petitioner asserts that it would have been obvious for one having ordinary skill in the art to have Morford’s camera device send the SDP file to the server as taught by Maes to provide configuration for the streaming media server. *Id.* at 49 (citing Ex. 1007 ¶ 457). Petitioner asserts that such a combination would have been an obvious design choice because Morford’s camera already contains the configuration settings, and that such a combination would permit the media servers to be apprised of current configuration settings for the stream. *Id.* at 50 (citing Ex. 1008 ¶ 459).

Petitioner asserts that these actions do not require router or firewall circumvention because the camera devices, located behind the firewall and communicating with servers with no need for configuration at a router, “push[es] video streams to servers.” *Id.* at 50–51 (citing Ex. 1020, 9:41–45, 9:28–35, 10:9–13, 14:27–34); Ex. 1007 ¶ 460).

[1.7] “transmit the digital content via the Internet connection to the second server contemporaneously with the live event and based on the data relating to the recording start time”

Petitioner asserts that Morford’s camera device teaches this limitation because it “start[s] a video pipeline thread to MS [media server] 508” when the current time is “within a valid image capture time frame” and constantly

posts to the media server over UDP. Pet. 51 (citing Ex. 1020, 9:41–45, 16:57–67; Ex. 1007 ¶¶ 462–463). Petitioner asserts that this does not require router or firewall circumvention because the camera devices “push video streams to servers.” *Id.* at 52 (citing Ex. 1020, 22:4–14; Ex. 1007 ¶ 465).

[1.8] “receive data relating to a recording end time for the live event from the first server via the Internet connection”; [1.9] “cease transmission of the digital content based on the data relating to the recording end time”

Petitioner asserts that Morford teaches these limitations through the actions of its camera device that receives streaming stop times from remote video servers and captures video only between start and stop times. Pet. 52–53. Petitioner asserts that this does not require router or firewall circumvention because “the camera devices initiates the request for the end time, and ceasing or stopping a transmission through a router/firewall is not a modification or circumvention of the router/firewall.” *Id.* at 53 (citing Ex. 1007 ¶ 471).

[1.10] “wherein the digital content is transmitted to the second server according to a first protocol”

Petitioner asserts that Morford and Maes together teach this limitation, by “transmitting streaming information from a camera device using, e.g., SIP/SDP (one protocol) (Ex. 1020, 8:65–9:5; Ex. 1009, [0204], [0205]), and transmitting digital content from the camera device using known streaming frameworks, e.g., RTP over UDP (another protocol).” Pet. 53 (citing Ex. 1020, 9:41–45; Ex. 1009 ¶¶ 58–59, 203–205, 207; Ex. 1007 ¶ 473).

[1.11] wherein the first protocol defines an encryption scheme for the digital content”

Petitioner asserts that Morford and Maes together teach this limitation, because “Morford discloses communications from the camera device can be

encrypted,” including video streams using RTMP and HLS AES-128, and Maes discloses using RTP to send digital content “encrypted to guarantee confidentiality.” Pet. 54 (Ex. 1020, 13:8-10, 14:23-26; Ex. 1009 ¶¶ 75, 107, 217). Petitioner further asserts that such combination providing Maes’ encryption schemes would “guarantee confidentiality” in the procedure of Morford. *Id.* (citing Ex. 1009 ¶ 75; Ex. 1007 ¶¶ 478, 480).

[1.12] “wherein the first protocol defines an error correction scheme for the digital content.”

Petitioner asserts that Maes’ RTP uses “ECC (Error Correction Code) mechanisms to reduce the effect of packet losses.” Pet. 54 (citing Ex. 1009 ¶ 218). Petitioner asserts that one having ordinary skill in the art would have found it obvious to include Maes’ error correction mechanisms in the procedure taught by Morford for that purpose. *Id.* at 55 (citing Ex. 1007 ¶¶ 482–483).

Rationale to Combine

Petitioner asserts that a person having ordinary skill in the art “would have been motivated to configure[] Morford’s camera devices to use protocols defining encryption and error correction to protect confidentiality of digital content and to reduce the effects of packet loss.” Pet. 37–38 (citing Ex. 1009 ¶¶ 75, 218; Ex. 1007 ¶ 417).

Petitioner further points to Maes as disclosing protocols such as SIP, SDP, and RTP over UDP. *Id.* at 36–37. Petitioner asserts,

Ubiquitous and standardized protocols such as SIP, SDP, and RTP would have provided a POSITA with a predictable set of tools for transmitting digital content to servers. . . . Given the standardization, ubiquity, and predictability of signaling protocols like SIP/SDP and transport protocols for audio/video like RTP, a POSITA would have been strongly motivated, and it would have been an obvious design choice, to configure

Morford's camera device to use such well-known signaling/description and audio/video transport protocols to establish digital content streams with, and transport digital content to, servers, and such would require only ordinary skill and produce predictable results.

Id. at 37 (citing Ex. 1007 ¶ 416).

b) Analysis

Having reviewed the entirety of the record and analyzed the evidence, we determine, with respect to the limitations not specifically contested by Patent Owner, that Petitioner's assertions are supported by the record, in the manner discussed above. Regarding those limitations contested by Patent Owner, we address and analyze those limitations below. As discussed below, we determine that Petitioner has shown, by a preponderance of the evidence, that claim 1 is unpatentable under § 103 as obvious over the combination of Morford and Maes.

(1) Without modification or circumvention of the router

Patent Owner first argues that the prior art does not teach using an autonomous request to communicate with an ABD behind a router without modification or circumvention of the router. Resp. 31. Patent Owner argues that the art relied upon by Petitioner "would not function with devices behind a router without additional setup." *Id.* at 32.

Patent Owner argues that Morford "discloses a wide variety of unsolicited two-way communications" between server and cameras (alleged ABDs). Resp. 33. Patent Owner further argues that these communications indicate that there is no router blocking communication, or that such routers have been modified or circumvented to allow those unsolicited communications. *Id.* at 33–34. Patent Owner points to the data request from

Morford's server to the camera device as a "wrong-way request." *Id.* at 34 (citing Ex. 1020, 1:31–36).

Petitioner contends, and we agree, that such argument is ineffective because Morford expressly discloses that its camera 302 may request, send and receive data through a router 304, and that its automatic push configuration allows the camera to be located behind a firewall and still communicate with servers. Reply 15–16 (citing Ex. 1020, 6:53–59, 9:28–39, 14:30–31, Figs. 3, 7). Morford states,

An automatic push configuration may allow camera device 502 to be located behind a firewall and still communicate with servers, without forwarding the camera device's IP to the server. Settings and other information can be obtained from servers in this manner. . . . Camera device 502 can check venue hours for the particular venue, such as streaming start and stop times, for example by consulting information stored at the remote video server 506.

Ex. 1020, 9:30–39. Because Morford's camera's request for timing data is sent *through* the firewall/router via a "push," the camera does not *circumvent* the router. Because Morford's process "avoids the need for a manual process in which the camera is configured with specific network settings on the router," the camera does not perform any *modification* of the router. Ex. 1020, 9:61–64; Pet. 45 (citing Ex. 1020, 9:30–33, 10:9–13); Reply 16.

Patent Owner next argues that Morford's local network server ("LNS") prevents Morford from teaching the claimed limitation. Patent Owner interprets Morford's camera's preregistration with Morford's LNS using an extra device as an intermediary to communicate outside the local network, rather than the claimed autonomous requests. Resp. 35. Patent Owner further argues that Morford does not disclose that the LNS itself does

not work without any modification or circumvention of the router such as a VPN, port forwarding, or operation in a DMZ. *Id.* at 35–36 (citing Ex. 10[20], 9:61–10:13; Ex. 2017 ¶ 113). Patent Owner also argues that Morford’s LNS is not situated outside a router, because it is on the same local network as the cameras, and the LNS would require circumvention to handle Morford’s two-way communications. *Id.* at 37 (citing Ex. 2020, Fig. 5), 38 (citing Ex. 2017 ¶ 161).

Petitioner argues that Patent Owner does not contest that Morford teaches preregistration of the camera with the LNS, not with the router. Reply 16 (citing Resp. 35). Petitioner argues that Morford’s LNS is described as using HTTPS, and does not necessarily require router modification or circumvention. *Id.* at 17 (citing Ex. 1020, 8:60–63). Petitioner further argues that the actions of Morford’s LNS are irrelevant to the actions of the camera device with respect to the actions of the claimed ABD, because the LNS functions only to register camera devices with the remote video server, not to perform any of the claimed functions. *Id.*

We agree with Petitioner that Morford’s LNS does not detract from our determination that Morford teaches an ABD situated behind a router, where the ABD performs the claimed actions without modification or circumvention of the router. Morford’s camera, not its LNS, is asserted to teach the claimed ABD. As pointed out by Petitioner, Morford’s automatic push communication causes the camera to directly communicate with the server after any interactions with the LNS. Reply 18 (citing Ex. 1020, 9:30–35). Petitioner does not rely on the LNS to be either the claimed router or ABD, or any other claimed feature. Pet. 19–29; Reply 16.

Although Patent Owner argues that Morford's LNS must modify or circumvent the router, Patent Owner's only support is the absence of a definite statement in Morford that the LNS does not modify or circumvent the router. Resp. 36; Ex. 2017 ¶ 113. We first note that "a reference need not state a feature's absence in order to disclose a negative limitation," particularly where the feature is not necessary to the reference. *AC Techs., S.A. v. Amazon.com, Inc.*, 912 F.3d 1358, 1367 (Fed. Cir. 2019) (citing *Suc-Chemie, Inc. v. Multisorb Techs., Inc.*, 554 F.3d 1001, 1004–05 (Fed Cir. 2009) (affirming finding that reference disclosed "uncoated" film where it did not describe the film as coated and did not discuss the necessity of coatings)). Here, there is no indication that Morford's LBS either explicitly or necessarily requires modification or circumvention of the router. Patent Owner's declarant, Dr. Akl, admits that Morford does not explain how the LNS communicates with remote devices. Ex. 2017 ¶ 113. Dr. Akl testifies that a person of ordinary skill in the art would have "likely underst[oo]d" that the LNS would have had free communication to outside servers because of the "many two-way communications in Morford." *Id.* Yet, Dr. Akl does not indicate that the claimed ABD communications, i.e., the live event content and its scheduling information, are unrestricted two-way communications in Morford such that the LNS acts to circumvent the router during those actions. Thus, we determine that the evidence does not show that the ABD, by way of the LNS, expressly or necessarily circumvents or modifies the router contrary to the claimed manner.

Moreover, even if the LNS would modify or circumvent the router for actions such as preregistering the ABD cameras (Reply 18; Ex. 2017 ¶ 112), the '317 patent describes a preregistration of its ABD with its scheduling

logic at the remote server. *Supra* at § III(A); Ex. 1003, 29:42–60. Thus, such preregistration is consistent with the claimed ABD, which requires only that the ABD may not modify or circumvent the router while performing the claimed live event content and its scheduling information actions. Consequently Morford’s preregistration of its camera with its LNS server is consistent with our determination that Morford teaches the limitations of claim 1.

Patent Owner further addresses Petitioner’s assertion that a person having ordinary skill in the art would have understood that a client-side router would allow request-response communications to pass unhindered. Resp. 48 (citing Pet. 45). Patent Owner argues that the claim requires more than “one-off transactions,” instead requiring the use of autonomous requests for controlling a broadcast device based on a schedule. *Id.* (citing Ex. 1007 ¶ 72; Ex. 2017 ¶ 66). Patent Owner argues that no prior art discloses the use of autonomous requests in the claimed way. *Id.*

We disagree with Patent Owner’s argument. Petitioner asserts, and we agree, that Morford’s camera devices “check for streaming start and stop times . . . by consulting information stored at the remote video server,” including for live events, wherein the start and stop times determine when recording occurs. Pet. 46 (citing Ex. 1020, 9:28–45, 10:9–13, 16:63–67, 22:4–21). Thus, Petitioner has shown Morford’s schedule-based control of its camera, and that camera-initiated requests and responses would pass unhindered through a router.

For the above-described reasons, we determine that Petitioner has shown Morford teaches that the claimed ABD operates without modification or circumvention of a router.

(2) *Optimized for audio and video compression*

Patent Owner next argues that Morford's ABD is not optimized for audio and video compression. Resp. 50. Patent Owner argues that, although Morford describes encoding at the camera, Morford does not explain how the encoding is performed by the camera, or what hardware is involved. *Id.* (citing Ex. 1021, 6:34–37).

Petitioner argues, “Morford explains that its camera 202 may include a processor 280 configured to encode video and/or audio data into a proper transmission format.” Reply 18 (citing Ex. 1020, 6:34-37, Fig. 2). Petitioner relies upon its declarant's statement that such processing would be understood by one having ordinary skill in the art to include compression and decompression of video and audio data. *Id.* at 18–19 (citing Ex. 1056 ¶ 49). Petitioner points to the fact that Morford's device is a camera, not a general-purpose computer, and thus, its processor would be understood to be optimized for audio and video handling, including compression.

We agree with Petitioner that Morford's camera includes a processor that performs encoding. We note that Patent Owner's declarant, Dr. Akl, stated that at the time of filing, “video is almost always compressed prior to transmission,” and the “standard mode of video compression at the time was the use of software encoders.” Ex. 2017 ¶ 45. Although we note Dr. Akl also stated that “there can be encoding without compression,” we determine that one having ordinary skill in the art would have recognized Morford's processor to perform encoding and, thus, compression. Furthermore, Morford describes its processor as being part of “hardware” 708, which “may handle conversions, encryption, or other data manipulation necessary for network communication or video streaming or presentation.” Ex. 1020,

14:1–25. Consequently, one having ordinary skill in the art would have understood Morford to teach (or at least suggest) a camera having a processor designed for; *i.e.*, optimized for, audio and video encoding and compression. Thus, even under Patent Owner’s construction, Morford teaches the claimed limitation.

(3) *Rationale to combine Maes with Morford*

Patent Owner argues that Petitioner has not shown sufficient reason to combine Maes with Morford. Resp. 53–57. Patent Owner first argues that this combination would not solve any problem presented in the ’317 patent. *Id.* at 54 (listing numerous problems alleged to be explicitly stated); 8–10, 14–18, 32–35, 55–56 (“hidden ABD problem”), 56 (“creating a livestreaming system for the common, unsophisticated user”). As noted by Patent Owner, however, a reason to combine may be found in “any need or problem known in the field of endeavor at the time of invention and addressed by the patent.” *Id.* at 54 (quoting *KSR*, 550 U.S. at 420). Thus, a showing of obviousness does not require patentee’s problem to be addressed by the art, and does not here turn on whether the combination of Maes with Morford solves a hidden ABD problem.

Patent Owner also argues that autonomous requests have drawbacks that would discourage a person having ordinary skill in the art from using them. Resp. 55. However, Petitioner asserts, and we agree, that Morford operates using autonomous requests. Pet. 44, 47 (“Morford’s camera device thus autonomously issues, via an Internet connection (over a network), a request to a server situated outside a router”). Petitioner does not rely on adding a teaching of autonomous requests to Morford, such that the

advantages and disadvantages of such a combination would be germane to the obviousness determination.

Patent Owner further argues, by way of pointing out that Maes is not being relied upon to teach the “request” step, that Maes’s SIP protocol would not work without router configuration, such as port forwarding. Resp. 43–46 (citing Pet. 45; Ex. 2019, 204:9–24). Patent Owner argues that Maes requires each SIP device to be both a client and server, and it requires unsolicited communications in both directions *Id.* (citing Ex. 2007 ¶¶ 95–98; Ex. 1009 ¶ 83). Patent Owner specifically points to a “barge-in” feature. *Id.* at 45 (citing Ex. 1009 ¶ 220, Fig. 21; Ex. 2017 ¶ 96).

Petitioner asserts that Maes teaches “the camera device is sitting behind a firewall [that] blocks the communication to the camera device” and the claimed encryption protocols. Pet. 41–42; Tr. 35:9–16. Petitioner does not rely on Maes for teaching the firewall in its combination with Morford, however, because Petitioner relies on Morford for teaching that the router includes a firewall, and that the router/firewall prevents remote access. Pet. 40–41 (citing Ex. 1020, 14:1–8, 9:30–35; Ex. 1007 ¶¶ 428–429). Petitioner clarified its lack of reliance on Maes for teaching a session description protocol (SDP) or SIP, limiting its reliance on Maes to the claimed encryption protocols. Tr. 73:4–20. Petitioner only relies on Maes for explaining that a firewall is of such nature that it prevents remote access. Pet. 41 (citing Ex. 1009 ¶ 229). Petitioner does not solely rely on Maes to explain the capabilities of firewalls, but also points to knowledge in the art as to the ability of firewalls in conventional routers to prevent remote access. *Id.* (citing Ex. 1007 ¶¶ 431–432).

Therefore, Patent Owner's arguments based upon an alleged inability to combine Maes's SIP protocol with Morford do not address the asserted combination of Maes and Morford, in which Maes is relied upon only for its RTP encryption protocols and its statement on the nature of firewalls. Consequently, the presence of SIP in Maes does not provide a reason why a person having ordinary skill in the art would not have found it obvious to combine Maes and Morford in the manner asserted by Petitioner.

We agree that Petitioner has shown adequate rationale to combine the teachings of Maes's protocols defining encryption and error correction with the teachings of Morford, "in order to protect confidentiality of digital content and to reduce the effects of packet loss." Pet. 37–38. Consequently, we determine that Petitioner has shown a persuasive reason to combine Morford and Maes as asserted in its obviousness challenge.

For the above described reasons, Petitioner has shown, by a preponderance of the evidence, that claim 1 would have been obvious over the asserted combination of Morford and Maes.

4. *Claims 2–4, 11–14, 21, 22, 29, and 30*

Claims 11, 21, and 29 are independent claims having similar limitations to claim 1, and are addressed by Petitioner with the corresponding limitations of claim 1. Pet. 39–55. Patent Owner addresses claims 11, 21, and 29 in the same manner as claim 1. *See, e.g.*, Resp. 37–38.

With respect to claim 21, limitations [21.2]–[21.3], Petitioner asserts that the claimed scheduling logic remote from the ABD is taught by Morford's remote server that maintains information on venues and settings for camera devices, including venue hours such as streaming start and stop times. Pet. 41–43 (citing Ex. 1020, 2:64–67, 8:1–8, 8:48–54, 9:34–37).

Petitioner further asserts that the claimed server is taught by Morford's media server 508. *Id.* at 43 (citing Ex. 1020, Fig. 5, 2:64–67, 8:1–8).

With respect to claim 21, limitation [21.4], Petitioner asserts that the claimed interface of scheduling logic with a first user is taught by Morford's admin interface 501, which permits administrators and venue owners to set streaming start and stop times. Pet. 42 (citing Ex. 1020, 3:42–46, 6:63–65, 8:1–8, 8:48–54, 9:34–37. Petitioner points to the same sections of Morford as teaching claim 29's limitation [29.1] of receiving and storing schedule data from a first user on a server. *Id.*

With respect to the live video streaming to a second user [21.7] or a plurality of users [29.5] of claims 21 and 29, Petitioner asserts these are taught by Morford's description of delivering “live video and audio streams to any number of devices . . . from a single set of source live streams.” *Id.* at 52 (citing Ex. 1020, 10:14–18, 3:41–44; Ex. 1007 ¶ 472).

Claims 2–4, 12–14, 22, and 30 depend from their respective independent claims.

Claims 2 and 12 further limit claims 1 and 11, that “the router comprises a firewall.” Petitioner relies upon Morford for teaching the router comprising a firewall. Pet. 55 (citing Ex. 1020, 14:1–8, 9:30–35).

Claim 3 recites, “the ABD lacks a user interface permitting a user to input the recording start time of the live event via the ABD.” Petitioner relies upon Morford's description of its camera as a surveillance camera without a user interface. *Id.* (citing Ex. [1]020, 6:5–10).

Claims 4, 14, 22, and 30 recite the use of a backhaul protocol transporting the digital content or video data from the ABD to the server using a plurality of packets, each packet comprising encrypted video or

digital content data and error correction information. Petitioner relies upon Maes’s teaching of RTP over UDP to transport digital content in a plurality of RTP packets to a server, in which error correcting information is included in a packet-based data stream, and encryption of the content is indicated in the header. Pet. 57 (citing Ex. 1009 ¶¶ 75, 89, 107, 217, 218; Ex. 1007 ¶¶ 496–498). Petitioner asserts that RTP over UDP is a backhaul protocol. *Id.* (citing Ex. 1003; 1:42–43; Ex. 1007 ¶ 495).

Claim 13 recites, “the ABD autonomously receives data relating to a recording end time for the live event from the server via the Internet connection, and wherein the ABD ceases transmission of the digital content based on the data relating to the recording end time.” Petitioner relies upon Morford for its camera, using automatic push, retrieving start and stop times for a live event from the server. *Id.* at 58 (citing Ex. 1020, 4:26–30, 8:48–54 9:28–37, 9:39–45, 16:63–67, 22:4–21).

Patent Owner has not provided any arguments separate from those relating to claim 1. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378.

Having reviewed Petitioner’s arguments and supporting evidence, including the arguments summarized above for claim 1, we determine that Petitioner has established that the combination of Morford and Maes teaches or suggests the limitations of claims 2–4, 11–14, 21, 22, 29, and 30. Accordingly, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that these claims also would have been obvious over the combination of Morford and Maes.

5. *Conclusion on Obviousness over Morford and Maes*

In view of the above analysis, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–4, 11–14, 21, 22, 29, and 30 are unpatentable under § 103 as obvious over the combination of Morford and Maes.

E. Alleged Obviousness over Morford, Maes, and either Lu, McGrew, or Barreto

Petitioner contends that the subject matter of claims 5–10, 15–20, 23–28, and 31–36 would have been obvious over the combination of Morford, Maes, and either Lu, McGrew, or Barreto. Pet. 58–67. These claims depend from independent claim 1, 11, 21, or 29. For each of these asserted claims, Patent Owner relies upon its arguments presented with respect to claim 1. Resp. 14.

Claims 5, 15, 23, and 23 recite the protocol using UDP to transmit the packets from the ABD to the server, and the protocol uses TCP to deliver corresponding packet acknowledgements from the server to the ABD. Petitioner relies upon Lu’s teaching of a protocol using UDP to transmit packets over a transmit channel 260 from a sender to a receiver, and uses TCP to send acknowledgements (ACKS/NACKS) over a control channel to the sender. Pet. 59 (citing Ex. 1021 ¶¶ 31–32; Ex. 1007 ¶ 506).

Claims 6, 16, 24, and 32 recite the protocol facilitates transmission of information for addressing congestion along a backhaul path, comprising one or more of a number of buffers and bytes sent, positively acknowledged, negatively acknowledged, retransmitted due to timeout or negative acknowledgement, unreceived (lost) packets, statistics about round trip time used to calculate timeout values, whether a TCP socket is open or closed, transmit backlog on the TCP socket, and actual packet loss accompanied by

the last time actual loss data was received. Petitioner relies upon Lu's sending statistics including packet loss within an interval defined by the time between successful receipt of successive messages, and Lu's measurement of a round-trip delay that may require a time-out of a packet held in a buffer. Pet. 61–62.

Petitioner asserts that, because Maes acknowledged the need to incorporate TCP-like reliability when transmitting data using RTP over UDP, it would have been obvious to use Lu's protocol that leverages the reliability of TCP to provide packet acknowledgment and retransmission of lost packets, while still using RTP over UDP to transmit data packets. *Id.* at 58 (citing Ex. 1021 ¶¶ 5, 32; Ex. 1008 ¶ 503; Ex. 1009 ¶¶ 58–59). Petitioner relies on its declarant's statement that such a combination would have been within the skill of a person of ordinary skill in the art. *Id.* at 58–59 (citing Ex. 1007 ¶ 503).

Claims 7, 17, 25, and 33 recite, “the encryption scheme is one of eBC-0 and eBC-x16.” Petitioner characterizes eBC-0 encryption as “shared keys negotiated between a sender and receiver, where the sender XORs the plaintext (original data) with the key to create encrypted data and sends the encrypted data in a packet, and the receiver recovers the plaintext by XORing the encrypted data with the same shared key,” which may be of any length. Pet. 62–63. Petitioner characterizes eBC-16 encryption as using a 16-byte key, but otherwise identical to eBC-0 encryption. Petitioner relies upon McGrew's negotiation of a 20-byte shared key for a lasting session, in which the sender encrypts data using the key by an XOR operation on plaintext to generate cipher-text, and transmits the encrypted data in a packet. *Id.* at 63 (citing Ex. 1022, 5:8–13, 6:64–7:2, 8:36–45, 8:63–67).

Petitioner also points to McGrew's receiver that recovers the original plaintext/data "in a symmetrical fashion with the same cipher key."

Id. (citing Ex. 1022, 4:37–43, 10:9–15). Petitioner further points to McGrew's suggestion of a key of 16 bytes. *Id.* at 64 (citing Ex. 1022, 6:50–55). Petitioner asserts that, because Morford and Maes disclose encrypting digital contact but do not describe a particular encryption scheme, a person having ordinary skill in the art would have had reason to use McGrew's encryption scheme to perform the desired encryption. *Id.* at 62 (citing Ex. 1020, 14:23–26; Ex. 1009 ¶ 75; Ex. 1007 ¶ 518). Petitioner relies on its declarant's statement that such a combination would have been well within the skill of a person of ordinary skill in the art at the time of the invention. *Id.* (citing Ex. 1007 ¶ 518).

Claims 8, 18, 26, and 34 recite, "the error correction scheme is a 1-dimensional XOR scheme suitable for recovering one missing packet from a group of N packets." Petitioner relies on Barreto's teaching of an FEC scheme to minimize packet retransmission in which "'n' continuous packets and every mth packets till k" (i.e., a group of N packets) are "XORed together," and a "XOR packet" is transmitted "immediately following its corresponding packets" and includes a "XOR value" and "cumulative byte value." Pet. 65 (citing Ex. 1023, 10:26–28, 32:3–15, 32:58–33:3; Ex. 1007 ¶ 527). Petitioner further asserts that if only a single packet is missing, the receiver uses the XOR value and the cumulative byte value to recover the missing packet. *Id.* (citing Ex. 1023, 32:58–33:3). Petitioner asserts that the XOR would be understood to be 1-dimensional, because the vertical and horizontal window size refer to the data sent, and not the dimensions of the XOR. *Id.* (citing Ex. 1023, 12:3–5, 32:7–23; Ex. 1007 ¶¶ 528–529).

Claims 9, 19, 27, and 35 recite, “the value of N is selected to correspond to the last packet of a multi-packet frame.” Petitioner relies on Barreto’s XORing and sending a group of packets, where the number of packets to be sent is selected based on network conditions such as packet loss and RTT. *Id.* at 66 (citing Ex. 1023, 32:3–15). Petitioner asserts that the last member of a group would be understood to be designated as “N.” *Id.* (citing Ex. 1007 ¶¶ 534–535).

Claims 10, 20, 28, and 36 recite, “the error correction scheme is fBC-X1d.” Petitioner characterizes the fBC-X1d scheme as

a 1-dimensional XOR error correction scheme in which, for a group of N packets, one packet is transmitted having error correction information including a result of XORing the group of N packets and a total byte count of the group of N packets. . . . This scheme allows a receiver to “XOR the packets it has received” with the XOR result, and recover one missing packet based on the total byte count (e.g. subtracting sizes of the received packets from the total byte count to determine the size of the missing packet).

Pet. 66 (citing Ex. 1003, 14:66–15:2-20; Ex. 1007 ¶ 537).

Petitioner relies on Barreto’s

process in which a group of packets are “XORed together,” and the resulting XOR value and the total number of bytes for the group are “sent in a packet immediately following its corresponding packets.” If one of the packets is missing, the receiver uses the XOR value “to recover the missing packet by XORing this with the packets that were received” and “determines the number of bits in the lost packet by subtracting bytes received from the current cumulative byte value.”

Id. at 67 (citing Ex. 1023, 32:3-33:5; Ex. 1007 ¶ 538).

Petitioner asserts that, because Maes contemplates using error correction but does not provide a particular scheme, it would have been

obvious to use Barreto's error correction scheme to provide such a scheme in the Morford-Maes combination. *Id.* at 64 (citing Ex. 1009 ¶¶ 89, 218; Ex. 1007 ¶ 525). Petitioner relies upon its declarant's statement that such combination would have been well within the skill of a person having ordinary skill in the art. *Id.* (citing Ex. 1007 ¶ 525).

As discussed, *supra*, we determine that Petitioner has established by a preponderance of the evidence that claim 1 and the remaining independent claims would have been obvious. Petitioner has provided additional explanation for the manner by which the combination of Morford, Maes, with either Lu, McGrew, or Barreto is asserted to teach each limitation of claims 5–10, 15–20, 23–28, and 31–36, and Petitioner has explained why an ordinary artisan would have been motivated to combine these references.

Pet. 58–67. And we agree with Petitioner's additional explanation and citations. Consequently, we determine Petitioner has shown, by a preponderance of the evidence, that claims 5–10, 15–20, 23–28, and 31–36 are unpatentable under § 103 as obvious over the combination of Morford, Maes, and either Lu, McGrew, or Barreto.

IV. PATENT OWNER'S MOTION TO EXCLUDE

Patent Owner filed a Motion to Exclude. Paper 44 (Mot. Exclude). Petitioner filed an Opposition (Paper 46), and Patent Owner filed a Reply (Paper 51). We address Patent Owner's Motion in this Decision. We have considered each argument in these filings, and deny Patent Owner's motion to exclude. We note that we have not relied on any of the disputed evidence in finding any claim not unpatentable or unpatentable, and the motion may also be dismissed as moot for that reason.

A. Legal Principles

Our determination considers that “[t]he policy considerations for excluding expert testimony, such as those implemented by the gatekeeping framework established by the Supreme Court in *Daubert* . . . are less compelling in bench proceedings such as inter partes reviews than in jury trials.” *Nestle Healthcare Nutrition, Inc. v. Steuben Foods, Inc.*, IPR2015-00249, Paper 76 at 23 (PTAB June 2, 2016); *see also Seaboard Lumber Co. v. U.S.*, 308 F.3d 1283, 1302 (Fed. Cir. 2002) (stating that the concerns underlying *Daubert* are “of lesser import in a bench trial, where no screening of the fact finder can take place”). Additionally, “we take into account the qualifications of an expert witness—and any shortcomings revealed through cross-examination—when evaluating the weight to be given that witness's testimony. . . . the wholesale exclusion of a witness’s declarations is rarely called for in a proceeding before the Board.” *Ascend Performance Materials Operations LLC v. Samsung Sdi Co., Ltd.*, IPR2020-00349, Paper 53 at 11 (PTAB July 15, 2021). Under that framework, we consider Patent Owner’s arguments as they pertain to the *inter partes* review before us.

B. Analysis

Patent Owner moves to exclude paragraphs 8–29, 34–39, and 43–45 of Dr. Easttom’s declaration, Exhibit 1056, because of “numerous conclusory and unsupported statements about technologies.” Mot. Exclude 1. Patent Owner argues that these statements must be excluded because “an expert [must] disclose his sources.” *Id.* at 2. Patent Owner further argues that Dr. Easttom’s testimony is false and could not have been the result of any reasonable investigation. *Id.* Patent Owner also seeks to exclude exhibits that are cited in Exhibit 1056 because they are neither prior art nor

cited in Petitioner’s Reply. *Id.* at 1 (seeking to exclude Exhibits 1057–1063 and 1065–1067).

1. *Testimony relating to the “Hidden ABD Problem”*

Patent Owner argues that paragraphs 8–29, and Exhibits 1057–1063 cited therein, should be excluded because there is “no utility for the testimony in this case” because it seeks to prove that the Hidden ABD Problem at issue in the proceeding was “already solved.” Mot. Exclude 5–6. Patent Owner argues that this testimony is irrelevant because the ’574 Patent “already explains that there were several existing solutions to the Hidden ABD Problem.” *Id.* at 5. Patent Owner argues that this irrelevance, and resulting confusion, require exclusion of this evidence under sections 401–403 of the Federal Rules of Evidence.

We are not persuaded by this argument. Patent Owner’s Response argues that the ’574 patent is a “combination of solutions” to problems, including the “Hidden ABD Problem.” Resp. 9–10. Thus, we do not agree that Dr. Easttom’s testimony on known solutions to the Hidden ABD Problem is irrelevant to the proceeding such that it should be excluded under sections 401–403 of the Federal Rules of Evidence.

Patent Owner further argues that Dr. Easttom’s statements that Exhibits 1057–1063 were widely cited and would have been familiar to a person having ordinary skill in the art are unsupported. Mot. Exclude 6. Specifically, Patent Owner further argues that Dr. Easttom does not provide publication dates to show that these documents would qualify as “printed publications” at the time of invention. *Id.* Patent Owner argues that this evidence is therefore not based on sufficient, disclosed facts or data, and should be excluded under section 702 of the Federal Rules of evidence.

We are not persuaded by this argument. First, there is no blanket requirement that corroborating evidence be in the form of prior art documents. *See, e.g., In re Wilson*, 311 F.2d 266, 268-269 (CCPA 1962) (finding a post-critical date “teaching reference” to be permissible evidence of the inherent characteristics of a product). The date of a document (or lack thereof) goes to the weight to be given to evidence, rather than its admissibility. Second, Dr. Easttom’s corroborating evidence is based on sufficient facts and data that have been disclosed in the proceeding. For example, Dr. Easttom cites Ex. 1057 to support his testimony that “[i]n the early 1990s,” the Internet faced “IP address depletion” and “scaling in routing” as its “most compelling problems.” Ex. 1056 ¶ 8 (citing Ex. 1057 Abstr., § 1). Ex. 1057 describes itself as a “May 1994” memo that “provides information for the Internet community” and that its distribution is “unlimited.” Ex. 1057 states, “[t]he two most compelling problems facing the IP Internet are IP address depletion and scaling in routing;” *i.e.*, that these problems are well known to those in the IP Internet field at that time. *Id.* In view of the totality of the evidence presented, we determine that Dr. Easttom’s testimony is not of such character as to warrant exclusion under section 702 of the Federal Rules of Evidence. In considering the above testimony, we note that Patent Owner has deposed Dr. Easttom (Ex. 2055), and we have considered the statements made in that deposition in determining the weight given to Dr. Easttom’s testimony.

2. *Testimony related to prior art systems and processors*

Patent Owner argues that Dr. Easttom provides statements concerning alleged prior art systems and processors that are insufficiently supported by corroborating evidence. Mot. Exclude 11–12 (citing Ex. 1056 ¶¶ 34–39),

12–13 (citing Ex. 1056 ¶¶ 43–45), 14–15 (citing Exs. 1065–1067). Patent Owner argues that Dr. Easttom’s analysis lacks claim charts or element-by-element analysis, misrepresents Patent Owner’s expert by changing a word in a quote, and/or lacks sufficient sources to support his statements. *Id.* at 11–15. Patent Owner argues that Dr. Easttom’s statements concerning alleged prior art systems are unsupported, irrelevant, and prejudicial in that the statements misrepresent the state of the prior art at the relevant time. *Id.* at 12. Patent Owner argues that Dr. Easttom’s statements concerning processors are irrelevant because there is no evidence that any of those processors predate the patent or include the necessary hardware for an ABD. *Id.* at 13.

Petitioner argues that the statements concerning alleged prior art systems were made in response to statements made by Dr. Akl in his declaration supporting Patent Owner’s Response. Opp. Mot. Exclude 8–9 (citing Ex. 1056 ¶¶ 35–38).

We agree with Petitioner that the indicated statements of Dr. Easttom were responsive to statements made by Dr. Akl in his declaration supporting Patent Owner’s Response. For example, Dr. Easttom states that Dr. Akl was incorrect in characterizing the 2005 version of Slingbox as lacking automatic router setup, citing to the 2005 Slingbox user manual. Ex. 1056 ¶ 35 (citing Ex. 2017 ¶ 168; Ex. 1065, 24, 35). Because Dr. Easttom’s statements respond to statements in Dr. Akl’s declaration, they qualify as relevant evidence under FRE 401. Because Dr. Easttom provides citations to supporting evidence, bearing some indicia supporting their timeliness, Dr. Easttom’s statements are sufficiently supported by identified sources such that their exclusion is not warranted by the Federal Rules of Evidence.

Petitioner further argues that the statements concerning prior art computer processors need not be proven correct to be relevant, so long as Dr. Easttom's opinions are explained and result from reliable principles and methods based on the facts of the case. Opp. Mot. Exclude 10–11. Petitioner points to Dr. Easttom's reliance on his personal experience and knowledge, and examples of specific processors with their public release dates. *Id.* at 11.

We agree with Petitioner that the indicated statements of Dr. Easttom were made based upon his personal knowledge, based upon his experience as set forth in the declaration, and supported by examples of the “1991 S3 Graphics . . . S3 86C911 processor” and the NVIDIA's 1999 “Geoforce GPU.” Dr. Easttom further provides footnotes to corroborate these examples. Ex. 1056, 24 n. 2–3. Because these statements and analysis are provided to support Dr. Easttom's opinion that Patent Owner's ABD construction would have been a “mere design choice” known to a person having ordinary skill in the art at the relevant time, yielding predictable results, these statements are relevant evidence under FRE 401. Because Dr. Easttom provides sources for purposes of corroboration, he has disclosed factual support for his opinion. Consequently, Dr. Easttom's statements are sufficiently supported by identified sources such that their exclusion is not warranted by the Federal Rules of Evidence.

In view of the totality of the evidence presented, we determine that Dr. Easttom's testimony is not of such character as to warrant exclusion under section 702 of the Federal Rules of Evidence. In considering the above testimony, we note that Patent Owner has deposed Dr. Easttom (Ex. 2055), and we have considered the statements made in that deposition in

determining the weight given to Dr. Easttom's testimony. Consequently, we deny Patent Owner's Motion to Exclude.

V. PETITIONER'S MOTION TO STRIKE

A. Legal Principles

A sur-reply "may not be accompanied by new evidence other than deposition transcripts of the cross-examination of any reply witness." 37 C.F.R. § 42.23(b).

B. Analysis

Petitioner argues that Patent Owner filed Exhibits 2054 and 2056–2074 with its Sur-reply, and that these Exhibits comprised new evidence in contravention of the Board's rules. Mot. Strike 1–2. Petitioner argues that entry of Patent Owner's Sur-reply evidence unduly prejudices Petitioner by not permitting it a response to such evidence. Reply Mot. Strike 1.

Patent Owner argues that this issue is moot because Patent Owner's Motion to Exclude relies upon nearly all of the same evidence. Opp. Mot. Strike 1. Patent Owner argues that Petitioner did not move to strike this evidence from the Motion to Exclude. *Id.* at 1, 9–10. Patent Owner further argues that § 42.23(b) prevents Patent Owner from the opportunity to submit rebuttal evidence per 5 U.S.C. § 556(d). *Id.* at 2, 10–12. Patent Owner further argues that the submitted evidence was necessary to adequately respond to Dr. Easttom's invitations for further research presented in his cross-examination. *Id.* at 2–9.

We agree with Petitioner that Patent Owner filed new evidence in contravention of the Board's rules. During oral argument, Patent Owner agreed that it (1) was aware that our rules did not allow such a filing and (2) did not contact the Board to seek any relief before filing the exhibits. Tr.

86:9–17. Our rules provide for waiver or suspension of any requirement placed by our rules, including the prohibition on submitting new evidence with a Sur-reply, and for placing conditions on the waiver or suspension. 37 C.F.R. § 42.5(b). Thus, the proper avenue for seeking entry of additional evidence is not by submitting such evidence *sub silentio*, but by requesting authorization to file such evidence and permitting the Board to determine whether such a submission should be entered and the scope and timing of the submission, as well as determining whether the other party will be provided with further opportunity to respond with or without additional evidence.

Moreover, Patent Owner’s reliance on such evidence to support its Motion to Exclude does not cure its improper method of submission.

Consequently, we grant Petitioner’s Motion to Strike Exhibits 2054 and 2056–2074.

VI. CONCLUSION¹²

For the foregoing reasons, we determine Petitioner has established by a preponderance of the evidence that all of the asserted claims, claims 1–36, are unpatentable. Consequently, we need not further determine patentability based on Petitioner’s remaining assertions of obviousness. In summary,

¹² Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–4, 11– 14, 21, 22, 29, 30	103	Morford, Maes	1–4, 11–14, 21, 22, 29, 30	
5, 6, 15, 16, 23, 24, 31, 32	103	Morford, Maes, Lu	5, 6, 15, 16, 23, 24, 31, 32	
7, 17, 25, 33	103	Morford, Maes, McGrew	7, 17, 25, 33	
8–10, 18– 20, 26– 28, 34–36	103	Morford, Maes, Barreto	8–10, 18–20, 26–28, 34–36	
1–4, 11– 14, 21, 22, 29, 30	103 ¹³	Allen, Maes, Horowitz		
5, 6, 15, 16, 23, 24, 31, 32	103 ¹⁴	Allen, Maes, Horowitz, Lu		
7, 17, 25, 33	103 ¹⁵	Allen, Maes, Horowitz, McGrew		

¹³ Because these claims have been determined to be unpatentable over Morford and Maes, we need not reach this asserted obviousness contention.

¹⁴ Because these claims have been determined to be unpatentable over Morford, Maes, and Lu, we need not reach this asserted obviousness contention.

¹⁵ Because these claims have been determined to be unpatentable over Morford, Maes, and McGrew, we need not reach this asserted obviousness contention.

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
8–10, 18– 20, 26– 28, 34–36	103 ¹⁶	Allen, Maes, Horowitz, Barreto		
Overall Outcome			1–36	

VII. ORDER

For the foregoing reasons, it is:

ORDERED that Petitioner *has shown* based on a preponderance of evidence that claims 1–36 are unpatentable; and

FURTHER ORDERED because this is a final written decision, the 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;

FURTHER ORDERED that Patent Owner’s Motion to Exclude is *denied*; and

FURTHER ORDERED that Petitioner’s Motion to Strike is *granted*.

¹⁶ Because these claims have been determined to be unpatentable over Morford, Maes, and Barreto, we need not reach this asserted obviousness contention.

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