

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NETFLIX, INC.,
Petitioner,

v.

AFFINITY LABS OF TEXAS, LLC,
Patent Owner.

Case IPR2016-01701
Patent 9,094,802 B2

Before KEVIN F. TURNER, LYNNE E. PETTIGREW, and
JON B. TORNQUIST, *Administrative Patent Judges*.

TORNQUIST, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Netflix, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1, 3–5, 9–11, 13–18, and 20 of U.S. Patent No. 9,094,802 B2 (Ex. 1001, “the ’802 patent”). Affinity Labs of Texas, LLC (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 8, “Prelim. Resp.”). Upon consideration of the Petition and the Preliminary Response, we determined that Petitioner had demonstrated a reasonable likelihood that it would prevail with respect to claims 1, 3–5, 9, 11, 13–18, and 20 of the ’802 patent. Paper 9, 25 (“Institution Decision” or “Inst. Dec.”). Thus, we instituted *inter partes* review with respect to those claims. We did not institute review, however, with respect to challenged claim 10. *Id.*

Following the institution of trial, Patent Owner filed a Patent Owner Response (Paper 15, “PO Resp.”) that was essentially identical to its Preliminary Response, and Petitioner filed a Reply (Paper 16, “Pet. Reply”). An oral hearing was held on December 21, 2017, and a transcript of the oral hearing is included in the record. Paper 30 (“Tr.”).

In support of its arguments, Petitioner relies upon the declaration testimony of Dr. Nader Mir (Ex. 1007). Patent Owner did not submit declaration testimony in support of its Preliminary Response or Patent Owner Response.

We have jurisdiction under 35 U.S.C. § 6 and this Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

B. Related Proceedings

The parties note that the '802 patent is at issue in *Affinity Labs of Texas, LLC v. Netflix, Inc.*, 1:15-cv-849-RP (W.D. Tex.). Paper 7, 1; Pet. 5. Related U.S. Patent No. 9,444,868 B2 is also the subject of IPR2017-00122. See IPR2017-00122, Paper 10.

C. The '802 Patent

The '802 patent is directed to a delivery system for digitally stored content, including audio, video, and textual information. Ex. 1001, 1:25–27, 3:19–23, 3:52–54. The '802 patent instructs that this information may be “formatted, segmented, compressed, modified, etc.” during communication to a user. *Id.* at 3:23–29. In addition, in one embodiment of the '802 patent, the selected audio information may be wirelessly communicated using a “hybrid of wireless communication rates.” *Id.* at 6:5–6:8. In this method, “the selected audio information may first be transmitted to the electronic device via high-speed communication until enough information” is buffered into the memory of a recipient device. *Id.* at 6:8–12. Slower communication speeds may then be used to communicate additional selected audio information to the device. *Id.* at 6:12–15.

D. Illustrative Claim

Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method to deliver media, comprising:

organizing an available media into a plurality of independent segment files to facilitate delivery;

formatting a given segment to facilitate an outputting of the given segment at a given rate;

formatting a different segment to facilitate an outputting of the different segment at a different rate, wherein the different rate is slower than the given rate;

generating a list that includes an address for each of the plurality of independent segment files;

receiving an HTTP communication that indicates a desire to access the available media;

sending the list in response to receiving the HTTP communication;

sending the given segment; and

sending the different segment.

Ex. 1001, 18:30–45.

E. Instituted Grounds of Unpatentability

We instituted trial on the following grounds (Inst. Dec. 25):

Reference(s)	Basis	Claim(s) Challenged
Treyz ¹ and Fuller ²	§ 103	1, 3–5, and 14–17
Treyz, Fuller, and Glaser ³	§ 103	9, 11, and 13
Treyz, Fuller, and Hild ⁴	§ 103	20
Production Guide ⁵	§ 103	1, 3–5, and 14–18
Production Guide and Hild	§ 103	20

¹ US 6,678,215 B1, issued Jan. 13, 2004 (Ex. 1015).

² US 6,711,622 B1, issued Mar. 23, 2004 (Ex. 1016).

³ US 6,985,932 B1, issued Jan. 10, 2006 (Ex. 1017).

⁴ US 7,761,554 B1, issued July 20, 2010 (Ex. 1018).

⁵ RealNetworks RealSystem G2 Production Guide (Ex. 1026).

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, “[a] claim in an unexpired patent 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, 2142 (2016) (upholding the use of the broadest reasonable interpretation standard). In determining the broadest reasonable construction, we presume that claim terms carry their ordinary and customary meaning. See *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). A patentee may define a claim term in a manner that differs from its ordinary meaning; however, any special definitions must be set forth in the specification with reasonable clarity, deliberateness, and precision. See *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Upon review of the record as a whole, we determine that the terms “an available media” and “segment(s)” require construction.

an available media

Independent claims 1, 9, and 14 require “an available media” (claim 1), “available media” (claim 9), or “a media” (claim 14). Ex. 1001, 18:31, 19:13, 20:4. In IPR2014-00407, which was directed to related U.S. Patent No. 8,359,007 (“the ’007 patent”), we construed “an available media” to mean “content accessible from a source of audio, video, and/or textual information,” but noted that the term is “not limited to a single file, song, or video, and may encompass, at a minimum, a collection of audio or video files.” *Samsung Electronics Co. v. Affinity Labs of Texas, LLC*, Case IPR2014-00407, slip. op. at 6 (PTAB July 21, 2014) (Paper 15, 6). This construction was supported by dependent claims 12 and 13 of the ’007

patent, which recite that “the available media” may be a “collection of audio files” (claim 12) or a “collection of video files” (claim 13). *Id.* Patent Owner did not subsequently contest this construction in IPR2014-00407. *See Samsung Electronics Co. v. Affinity Labs of Texas, LLC*, Case IPR2014-00407, slip. op. at 6 (PTAB July 20, 2015) (Paper 48) (Final Written Decision); *Affinity Labs of Texas, LLC v. Samsung Electronics Co.*, 669 F. App’x 576 (Fed. Cir. 2016) (Rule 36 affirmance).

Because the ’007 patent and the ’802 patent each claim benefit to the same parent application through a line of continuing applications, we must interpret the same terms within these patents consistently. *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005) (“Because NTP’s patents all derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents.”). Moreover, neither party provides citations to intrinsic or extrinsic evidence in this proceeding to suggest a different construction of “an available media” should apply to the ’802 patent. Thus, upon review of the record as a whole, we construe “an available media,” as well as the related terms “available media” and “media,” to include “content accessible from a source of audio, video, and/or textual information,” and note that the terms are not limited to a single file, song, or video, and may encompass, at a minimum, a collection of audio or video files.

Segments, Segment Files, and Independent Segment Files

Claim 1 requires the step of “organizing an available media into a plurality of independent segment files,” claim 9 requires providing network locations “for segments of available media,” and claim 14 requires “a media

available for delivery as a series of segments.” Ex. 1001, 18:31–32, 19:12–13, 20:4.

Petitioner contends the “segments” or “segment files” recited in the challenged claims may be individual songs or videos within a collection of songs and videos, i.e., individual segments of the broader collection of songs and videos, or may comprise segments of an individual song or video. See Pet. 21, 41–43. Patent Owner contends the segments must be “*segments* of the same available media,” such as an individual song or video. PO Resp. 22–23, 26; Tr. 31:21–32:5.

The claims of the ’802 patent do not define what a “segment” of an available media is, and the written description of the ’802 patent does not use the terms “segments,” “segment files,” or “independent segment files.” The Specification does note, however, that “an audio file may be formatted, segmented, compressed, modified, etc. for the purpose of providing or communicating the audio invention.” Ex. 1001, 3:26–29. This disclosure supports a construction of “segments,” “segment files,” and “independent segment files” that encompasses portions of an audio file.

As noted above, however, the term “an available media” is not limited to an individual song or video file. And, when “an available media” includes a collection of audio or video files, the term segment—which is generally defined as “[e]ach of the parts into which something is or may be divided”—is broad enough to include individual songs, videos, or Internet radio stations within this collection.⁶ See, e.g., Ex. 3001. Thus, applying the

⁶ Although Patent Owner indicates that it disagrees with this construction, it does not direct our attention to any portion of the claims, written description,

broadest reasonable construction standard, we construe the terms “segments,” “segment files,” and “independent segment files,” when used in conjunction with the terms “available media” or “a media,” to include both individual songs, videos, and/or Internet radio stations in a media collection, as well as individual parts of a single song, video, or Internet broadcast.

B. Alleged Failure to Provide Proposed Claim Constructions

Patent Owner contends that during proceedings before the district court, Petitioner and its declarant, Dr. Mir, argued that several claim terms of the '802 patent, including the terms “independent segment files,” “segment file,” and “continuous outputting,” are “confusing” and require one to “guess” as to their meaning. PO Resp. 17–19. Patent Owner further contends that Petitioner argued before the district court that several claim terms of the '802 patent are set forth in means-plus-function format, yet failed to identify corresponding structure in this proceeding for these claim terms. *Id.* at 19–21. And, according to Patent Owner, because Petitioner and Dr. Mir did not understand the scope of several claim terms when the Petition was drafted, and did not identify corresponding structure for terms they alleged are in means-plus-function format before the district court, the Petition should be denied. *Id.* at 15–16, 19 (“[Petitioner] cannot meet its burden to show obviousness where it and its expert must speculate in order to construe the challenged claims and compare them to the prior art, and the petition should be denied.”), 21 (“[Petitioner’s] failure to identify a function and corresponding structure, or otherwise identify the scope and meaning of these terms, requires denial of this petition.”).

or prosecution history of the '802 patent that would suggest this construction is overbroad or otherwise unreasonable. PO Resp. 25–26.

We are not persuaded by these arguments. First, the district court has determined that the claims of the '802 patent are not in means-plus-function format, and neither party in this proceeding contends that the claims should be interpreted in this manner. Pet. Reply 11. Nor does Patent Owner contend that the prior art asserted in the Petition fails to disclose the claim limitations in question (“collection of instructions” and “delivery resource”). Thus, we do not agree that Petitioner’s failure to identify corresponding structure requires dismissal of the Petition. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”)).

Second, even if Dr. Mir could not identify the precise contours of several claim limitations before the district court, Petitioner and Dr. Mir correctly concluded that the Board, applying the broadest reasonable construction standard in this proceeding, would adopt constructions of the terms “segment(s)” and “an available media” that would, in combination, encompass parts of an individual song or video, as well as individual songs or videos within a broader media collection. Pet. 21, 41–43, 50. Petitioner and Dr. Mir also provide multiple citations to show where the disputed limitations are taught or suggested in the recited prior art. Patent Owner does not explain why Dr. Mir’s constructions, either express or implied, for the terms in question are incorrect, or why Dr. Mir’s citations to record

evidence do not support his conclusions.⁷ Thus, we do not consider Dr. Mir's prior testimony to be grounds for denying the Petition or ignoring his uncontested testimony. See Pet. Reply 12 ("Dr. Mir did not 'guess' as to the meanings of claim terms. Rather, he was aware of a spectrum of technologies invoked by each ambiguous claim term, and identified elements in the prior art he knew was within the broadest reasonable interpretation of those terms.").

C. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) 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. See *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) if in the record, objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

D. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art "would have been a person with a Bachelor's Degree in Electrical Engineering, Computer Science, or Computer Engineering, or equivalent experience, and one to two

⁷ Patent Owner did not depose Dr. Mir in this proceeding. Nor did Patent Owner present declaration testimony to rebut the conclusions reached by Dr. Mir regarding the claim terms in question.

years of experience in the field of computer networking and/or multimedia networks, particularly as those systems relate to media streaming technology.” Pet. 17 (citing Ex. 1007 ¶ 41). Patent Owner does not address the level of ordinary skill in the art relevant to the ’802 patent.

Because Petitioner’s uncontested definition of the level of ordinary skill in the art is reasonable and consistent with the art of record, we adopt it for purposes of this proceeding. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (noting that the prior art of record may reflect the level of ordinary skill in the art).

E. Claims 1, 3–5, and 14–17 over Treyz and Fuller

Petitioner contends the subject matter of claims 1, 3–5, and 14–17 would have been obvious over Treyz and Fuller.⁸ Pet. 18–32.

1. *Treyz*

Treyz is directed to devices that can receive and process audio and video files. Ex. 1015, 1:26–29, 8:63–9:7, Abstract. The device of Treyz may contain non-volatile memory, a processor, and a display that allows a user to view “text, graphics, and video.” *Id.* at 1:48–51, 9:4–6, 12:46–55, Fig. 10a. The device may also have a web browser that allows a user to interact with the Internet and select available content. *Id.* at 6:11–16, Fig. 9b, Fig. 14.

The device of Treyz may “handle audio such as prerecorded music, news, e-mail that is played using a voice-synthesizer, e-mail with voice attachments or other audio attachments, . . . Internet radio, . . . or any other

⁸ Petitioner originally challenged claims 1, 3–5, and 14–18 in view of Treyz and Fuller. Pet. 18. We declined to institute review, however, with respect to claim 18 on this ground. Inst. Dec. 13–14.

suitable audio content.” *Id.* at 1:33–39. This audio content “may be provided in the form of a downloaded digital file (e.g., files in the MP-3 format or any other suitable digital audio format)” or in the form of “streaming digital audio files.” *Id.* at 1:40–42, 1:56–60, 5:42–44, 9:20–23, Abstract (“An alarm clock radio is provided that handles downloaded audio files and streaming digital audio files.”).

Using the device of Treyz, a “user may opt to be awakened by music, news, e-mail, voice mail, a standard alarm buzzer, or any other suitable audio source or combination of sources.” *Id.* at 3:42–44. In this process, audio from various sources “may be combined to form customized channels.” *Id.* at 3:45–47. “For example, if the user enjoys country music, classical music, and sports news, these types of content may be combined (e.g., from Internet radio channels) into a custom channel.” *Id.* at 3:47–50. The user may then “schedule how portions or segments of the audio from [the] various sources are to be played. For example, the user may select the content and the duration for desired audio segments.” *Id.* at 3:49–53.

A web page may also be used to scroll through available Internet radio stations, with the user selecting from these radio stations “by clicking on links” for the stations or “by selecting the proper Internet addresses for the desired stations.” *Id.* at 5:13–42, 5:60–6:27. Figure 14 of Treyz, reproduced below, is “an illustrative screen (e.g., a web page)” that may be used to remotely select audio content. *Id.* at 8:8–11, 21:49–54.

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ENTER PRODUCT ID 228

USER NAME 230

PASSWORD 232

SET UP SCHEDULE 234

SEGMENT NO.	CONTENT	DURATION
1	BBC RADIO 5	5 MINUTES
2	E-MAIL	UNTIL FINISHED
3	KFRR-SAN FRAN.	UNLIMITED
4		

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Figure 14 is an illustrative web page for selecting audio content. Using the web page depicted in Figure 14, a user may “select from various content options using, for example, a drop-down menu, a pop-up list, direct alphanumeric entry, or any other suitable user interface.” *Id.* at 22:9–15. “After the user has selected the desired content for a given segment, the user may click on the corresponding cell in the duration column to supply a desired duration.” *Id.* at 22:15–18.

Treyz explains that “the downloading of audio or the real time streaming of audio to an audio device requires that a communications path be established between the audio device and a desired audio source.” *Id.* at 2:3–6. “Suitable communications technologies for providing audio to the audio device include technologies based on satellite systems, fiber optics, cable, wireless links, microwave links, free-space optical links, combinations of such technologies, etc.” *Id.* at 2:22–26; *see also id.* at 2:36–53 (noting that the audio device may communicate over paths that “provide higher quality signals or faster download times” as well as paths that require a “lower bandwidth approach”).

2. Fuller

Fuller is directed to a system for providing streaming audio and video data to multiple users. Ex. 1016, 1:14–17, 2:53–54. In Fuller, a web browser is used to review and select links for available content on a network. *Id.* at 4:45–49, 5:23–30, 8:30–36, Figs. 1–3. Figure 3 of Fuller, reproduced below, depicts a webpage presented to a user for selecting available content:

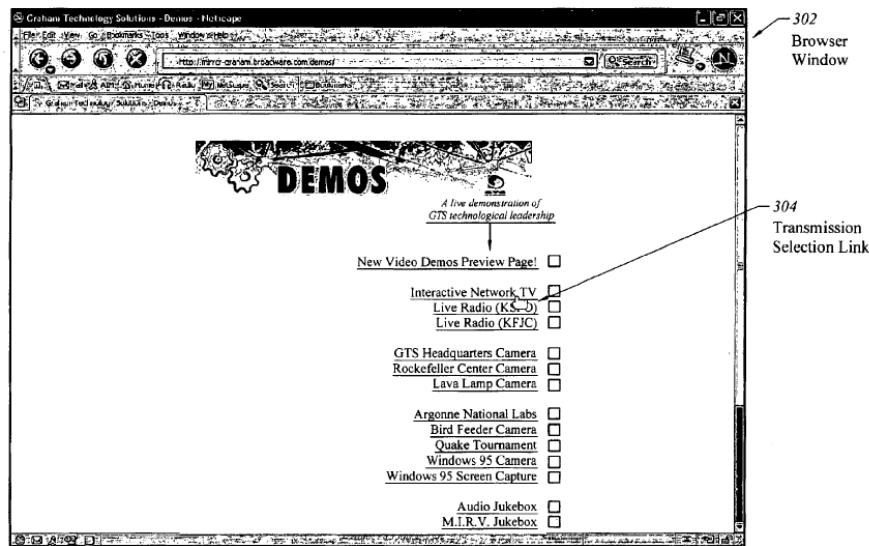


Figure 3 “illustrates a web page that a user can use to access a streaming audio and video broadcast” (*id.* at 3:41–42).

As shown in Figure 3 of Fuller, the list of available media presented to the user may include links for interactive network TV, live radio broadcasts, audio jukeboxes, and various camera feeds. *Id.* at 10:43–47, Fig. 3.

Fuller explains that when a user clicks on “a link that will initiate streaming audio,” a Java applet for decoding the audio data is provided to the user. *Id.* at 8:30–41. A real-time server then prepares the audio data by “breaking the audio information into time periods,” compressing this audio information into “various sets of compressed data corresponding to different audio rates,” and storing the audio segments into memory. *Id.* at 9:15–24. Fuller further explains that when the request is for a video, the real-time

server retrieves the requested video information in a format that it can use, such as a JPEG, MPEG, GIF, or AVI file, and compresses this information into a series of JPEG images, which may then be sent to the user in various formats, including “as part of a multipart MIME encoded file.” *Id.* at 5:55–58, 6:17–28, 6:60–65, 8:30–41, 9:49–67.

In the system of Fuller, the Java applet installed on the client machine may request an initial quality of audio or video from the server. *Id.* at 8:37–51, 10:48–55. If the Java applet subsequently determines that the audio or video information is not being received by the client at a sufficient rate, it “can request a different rate of transmission.” *Id.* at 10:11–14. For example, the Java applet may request “a lower rate corresponding to a lower audio or video signal that will more appropriately match the bandwidth of the client.” *Id.* at 10:14–17.

3. *Independent Claims 1 and 14*

Petitioner, supported by the testimony of Dr. Mir, persuasively identifies where the combination of Treyz and Fuller discloses every limitation of claims 1 and 14. Pet. 18–26, 29–30. For example, with respect to claim 1, Petitioner and Dr. Mir persuasively identify where Treyz and Fuller disclose organizing an available media into individual songs or video files, i.e., independent segment files, generating a list of these independent segment files in the form of a pull-down list or webpage that contains network locations for each segment of the available media, receiving an HTTP request for the list, and sending the list in response to the HTTP request (the organizing, generating, receiving, and sending steps). *Id.* at 21 (citing Ex. 1015, 3:45–55 (organizing audio segments to form a customized list); Ex. 1016, 6:22–38, 9:14–30 (breaking an audio file into discrete time

periods, or segments), 9:49–63; Ex. 1007 ¶ 85 (pp. 35–36)), 23 (citing Ex. 1015, 3:45–55, 5:32–36 (providing a list of links for Internet radio stations to a user), 4:50–5:3, 5:49–59, 7:57–61, 8:41–46, 11:53–61, 17:25–43, 18:12–26, 21:41–45, 23:10–16, Figs. 5, 9a, 9b, 10a; Ex. 1007 ¶ 85 (pp. 39–42)), 24–25 (citing Ex. 1015, 21:8–14 (“[A] web page including information on various available stations may be used to help the user select the desired stations.”), 23:11–16, Fig. 13; Ex. 1007 ¶¶ 82, 85 (pp. 42–44) (Dr. Mir testifying that one of ordinary skill in the art would have understood that a web page request relies upon an HTTP request sent from one computer to another computer)). Petitioner also persuasively identifies where Treyz and Fuller disclose allowing users to select available songs and/or Internet radio stations from the list or web page and then delivering the selected segment files to the users. Pet. 21–26 (citing Ex. 1015, 3:45–55, 5:32–36, 17:25–43, 21:8–14, 23:11–16, Fig. 13; Ex. 1016, 8:30–34; Ex. 1007 ¶ 85 (p. 35–44)).

In addition, with respect to the formatting and sending steps, Petitioner persuasively identifies where Fuller discloses breaking selected audio content into discrete time periods, compressing these discrete time periods at different rates (one slower than the other), and sending them to one or more users. Pet. 21 (citing Ex. 1016, 6:22–38, 9:14–30, 9:49–63; Ex. 1007 ¶ 85 (pp. 35–36)). Petitioner likewise persuasively identifies where Fuller discloses formatting a selected video file into JPEG frames, adjusting the rate of video transmission based on network conditions, and sending the JPEG frames to users as part of a multipart MIME encoded file. *Id.* at 21–23 (citing Ex. 1016, 6:22–38, 9:49–63, 10:11–17; Ex. 1007 ¶ 85 (pp. 36–39) (Dr. Mir testifying that in order for the rate of data transmission to change, the format of the segments must also change)), 25–26 (citing Ex. 1016,

10:11–17; Ex. 1007 ¶ 85 (pp. 45–46) (Dr. Mir testifying that Fuller discloses sending an audio or video signal at first and second rates)); *see also* Ex. 1016, 5:61–67 (noting that audio information may be converted into a number of formats, “corresponding to any of a number of audio transmission rates (examples include G.711 and G.723 audio compression formats)”), 6:17–38 (discussing the processing of audio and video data into sequenced digital frames or time periods), 6:60–67 (noting that video data may be transmitted as a multipart MIME encoded file).

Petitioner and Dr. Mir also persuasively identify where Treyz and Fuller disclose the limitations of independent claim 14, including: a media available as a series of segments and a playlist for this available media that includes different network locations for Internet radio broadcasts (Ex. 1015, 3:45–55, 5:24–38, 22:7–19; Ex. 1016, 10:40–47, Fig. 3); a delivery resource that is configured to respond to a series of file requests by transmitting information to the requesting device in a manner that facilitates a continuous outputting of the available media at the requesting device (Ex. 1015, 22:7–19; Ex. 1016, 9:8–12, 10:3–17 (“Thus, the client 112 will have a continuous audio signal being presented to the user.”)); and formatting the segments of available media into formats that can be delivered over links capable of communicating at different rates (Ex. 1015, 2:22–53, 14:36–48; Ex. 1016, 10:11–17); Pet. 29–30; *see also* Pet. 21–23, 25–26; Ex. 1007 ¶ 85 (pp. 35–46, 54–56) (Dr. Mir explaining where the limitations of claim 14 are disclosed in Treyz and Fuller).

Petitioner contends one of ordinary skill in the art would have sought to combine the disclosures of Treyz and Fuller, because both references concern the delivery of streaming media over a client/server network, and

because implementing Fuller’s method of transmission rate switching in Treyz would prevent the input buffer of Treyz from running out of data, which would result in substantial and perceivable quality degradation. Pet. 19–20 (citing Ex. 1007 ¶¶ 80–81). Petitioner also contends that, to the extent that the ability to use HTTP is not expressly disclosed in Treyz, it would have been obvious to one of ordinary skill in the art to provide the web browser of Treyz with the ability to utilize HTTP (as disclosed in Fuller), because “HTTP was a predominant protocol used prior to March 2000” and such functionality would have been desirable “to facilitate access to various web pages on the Internet.” *Id.* at 20.

Patent Owner contends the combination of Treyz and Fuller would not have rendered the claims of the ’802 patent obvious because the “list of links for Internet radio stations that the user may select” in Treyz does “not comprise links or network locations to **segments** of the same available media at different output rates as required by the claims.” PO Resp. 25–26. We are not persuaded by this argument, as we have construed the term “segment(s),” when used in conjunction with “an available media” or “available media,” to include not only parts of an individual song or video, but also individual songs and videos within a media collection. Moreover, Petitioner persuasively demonstrates that the segments in Treyz and Fuller are available at multiple output rates. Pet. 21–23; Ex. 1016, 9:15–19 (“The audio information is also compressed into various sets of compressed data corresponding to different audio rates.”), 10:14–17 (explaining that after the transmission of audio or video has begun, the Java applet of Fuller may request “a lower rate corresponding to a lower audio or video signal, that will more appropriately match the bandwidth of the client”).

Patent Owner also contends that independent claims 1 and 14 would not have been obvious over Treyz and Fuller, because these claims require that “[a]fter the available media is formatted into segments, the list or message is sent in response to an HTTP communication and facilitates delivery of the segments at different rates, wherein the rates are rates at which a streaming media can be output at a display device.” PO Resp. 22. With respect to independent claim 1, as we noted in the Institution Decision, Patent Owner’s argument presumes that each method step must be completed in sequential order, such that “the list that includes an address for each of the plurality of independent segment files” contains location information for previously formatted segments. PO Resp. 22–23; see Prelim. Resp. 17. Independent claim 1, however, is a method claim and “[u]nless the steps of a method actually recite an order, the steps are not ordinarily construed to require one.” *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1343 (Fed. Cir. 2001).

In determining whether steps of a method must be performed in order, we must first look to the claim language to determine whether, “as a matter of logic or grammar,” the method steps must be performed in the order written. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003). If they do not, “we look to the rest of the specification to determine whether it ‘directly or implicitly requires such a narrow construction.’” *Id.* (quoting *Interactive Gift*, 256 F.3d at 1343). “If not, the sequence in which such steps are written is not a requirement.” *Id.*

Other than the logical requirement that the list of addresses for each of the plurality of independent segment files must be generated before it is sent, and that the HTTP request must be received before the list can be sent in

response to this HTTP request, claim 1 does not expressly require any particular order for the prior or subsequent method steps. In particular, claim 1 does not require that the segment files be formatted at different rates before the list of independent segment files is generated and sent.

The remainder of the specification also does not directly or implicitly require that the steps be performed in any particular order, or that the files or segments be formatted *before* the list of network locations is generated. For example, in one embodiment of the '802 patent, the method for providing selected audio information to a user begins with a user accessing a webpage via the Internet. Ex. 1001, 14:46–50. The user then selects “desirable audio information,” including a song, a plurality of songs, or streaming audio. *Id.* at 14:52–56. A playlist is then created that represents the user’s selected audio information and “a list of network or URL locations comprised of the desirable audio information” is obtained. *Id.* at 14:62–15:3. Once the nature of the destination device is determined, the selected information is then formatted for delivery, optionally divided into component parts, and wirelessly communicated to a user. *Id.* at 15:18–45. Thus, in at least one embodiment of the '802 patent, the audio or video files are formatted after the list of network locations is generated and sent to the user.

Based on the foregoing, and except as discussed above, we do not construe claim 1 to require any particular order of executing the claimed method steps. Nor do we construe claim 1 to require that the independent segment files be formatted for outputting at different rates before the list of network locations is provided in response to the HTTP communication.

Patent Owner similarly asserts that claim 14 requires that “[a]fter the available media is formatted into segments, the list or message is sent in

response to an HTTP communication and facilitates delivery of the segments at different rates.” PO Resp. 22. Patent Owner does not explain, however, why the system of claim 14 actually requires the features it highlights, including: (1) sending the list or playlist, (2) an HTTP communication, or (3) formatting the segments at different rates. *See, e.g.*, Ex. 1001, 20:5–10 (requiring that the segments be configured for delivery via *links capable of communicating* at first and second rates). Thus, we do not find this argument persuasive.

Patent Owner also argues that Petitioner improperly incorporates documents by reference in order to establish the presence of the “list and message” limitations. PO Resp. 26–28. We are not persuaded by this argument because Petitioner, in addition to generally citing to the Board’s prior decisions in IPR2014-00407 and IPR2014-00408, provides multiple citations to Treyz and Fuller to support its assertion that a list of links for available content is generated and sent to the user. Pet. 23, 25 (citing Ex. 1015, 3:45–55, 4:50–5:3, 5:32–36 (“The user may set up the stations for the clock radio that the user is interested in by clicking on links for stations that the user is interested in or by otherwise selecting the proper Internet addresses for the desired stations.”), 5:49–59, 7:57–61, 8:41–46, 11:53–61, 17:25–43, 18:12–26, 21:41–45, 23:10–16, Figs. 5, 9a, 9b, 10a; Ex. 1007 ¶ 85 (pp. 39–42) (citing Ex. 1016, 8:30–34 (“[T]he client 112 initiates an HTTP request from the web server 131. This could be the result of the browser 102 receiving and displaying an HTML (hypertext markup language) page including a link that will initiate streaming audio and video.”))).

During oral argument, Patent Owner asserted that Petitioner has not demonstrated that the Internet radio stations in Treyz comprise a “file” or an

“independent segment file.” Tr. 47:11–50:6. This argument was not presented in the Patent Owner Response, and is waived. Paper 10, 3 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”); *see also Dell Inc. v. Acceleron, LLC*, 818 F.3d 1293, 1301 (Fed. Cir. 2016) (noting that the Board may not rely on a factual assertion made for the first time at oral argument); Office Trial Practice Guide, 77 Fed. Reg. 48,756, 48,768 (Aug. 14, 2012) (noting that no new evidence or arguments may be presented at the oral argument).

Regardless, Petitioner presents un rebutted testimony from Dr. Mir, applying the Board’s anticipated construction of “an available media” and “segment(s),” that this limitation is disclosed in the combination of Treyz and Fuller. Ex. 1007 ¶ 85 (pp. 35–44). In particular, under the section discussing organizing an available media into a plurality of independent segment files, Dr. Mir identifies Fuller’s disclosure of breaking up audio into one-half second time periods and storing these segments in memory, as well as Fuller’s disclosure of formatting video into individual JPEG frames and sending these frames to a user as a multipart MIME encoded file, as disclosing this limitation. *See* Pet. 21; Ex. 1007 ¶ 85 (pp. 35–36) (citing Ex. 1015, 3:45–55; Ex. 1016, 6:22–38, 9:14–30 (storing audio segments in memory for delivery to clients), 9:49–63 (discussing breaking video into JPEG frames and formatting these JPEG frames as part of a multipart MIME encoded file)). Patent Owner does not explain why the identified disclosures do not teach or suggest a “file” or “independent segment files.”⁹ *See*

⁹ We note that the Abstract of Treyz, which is cited by Petitioner and Dr. Mir in multiple instances, states that the device “handles downloaded audio

Tr. 50:8–16 (Patent Owner’s counsel stating that the combination of Treyz and Fuller “may very well” disclose a file).

Upon review of Petitioner’s and Patent Owner’s arguments and supporting evidence as a whole, we credit the testimony of Dr. Mir and find that the subject matter of independent claims 1 and 14 is disclosed in Treyz and Fuller. We also find that Petitioner has explained sufficiently why one of ordinary skill in the art would have sought to combine the relevant disclosures of the two references, i.e., to ensure that the output buffer of Treyz does not run out of data. Accordingly, Petitioner has demonstrated by a preponderance of the evidence that independent claims 1 and 14 would have been obvious over Treyz and Fuller.

4. Dependent Claims 3–5 and 15–17

Claims 3–5 depend, directly or indirectly, from claim 1. Ex. 1001, 18:46–61. Petitioner, supported by the testimony of Dr. Mir, persuasively identifies where Treyz and Fuller disclose the subject matter of claims 3–5, including: storing the segment files in a storage medium at compression rates that allow for playback in a format that facilitates an outputting at the playback device at or near the different rate (claim 3) (Pet. 26–27 (citing Ex. 1016, 5:3–7, 5:55–58, 6:22–38, 9:17–20 (noting that audio is compressed into different audio rates, with “[h]igher audio rates correspond[ing] to better quality audio signals”), 9:51–54; Ex. 1007 ¶ 85 (pp. 46–47) (Dr. Mir testifying that Fuller discloses compressing different segments in formats that facilitate outputting at a playback device at or near the different rate))))); transmitting video in response to an HTTP request sent by an electronic

files and streaming digital audio files.” Ex. 1015, Abstract (emphasis added); see Pet. 18, 19, 21; Ex. 1007 ¶ 66.

device having an internal battery, a recharging circuit for an internal battery, a display, and an application that allows the device to output the video on a display (claim 4) (*id.* at 24–25, 28 (citing Ex. 1015, 8:32–40, 9:3–5, 19:64–20:3; Ex. 1007 ¶ 85 (pp. 47–48) (Dr. Mir testifying that the device of Treyz may be a personal computer, which one of ordinary skill in the art would have understood to have batteries, a charging circuit, and a display)))); and providing a link to an available media on a website (claim 5) (*id.* at 29 (citing Ex. 1015, 21:38–45 (“Web page 216 may contain a station or channel selection option 224.”); Ex. 1016, 10:40–55 (disclosing the use of a browser window to select links for available content), Fig. 3; Ex. 1007 ¶ 85 (48–49))).

Claims 15–17 depend, directly or indirectly, from claim 14. Ex. 1001, 20:20–29. Petitioner, supported by the testimony of Dr. Mir, persuasively identifies where Treyz and Fuller disclose the subject matter of claims 15–17, including: using a first communication rate that is slower than the different rate (claim 15) (Pet. 30 (citing Ex. 1016, 10:56–11:6 (“Similarly, a set of audio rate selectors 512 allow the user to select a higher or lower quality audio signal,” which will cause the Java applet “to request the change in the audio rate”); Ex. 1007 ¶ 85 (pp. 56–57)))); formatting segments at various rates measured in bits per second, wherein the selected formats allow the segments to be delivered to the requesting device via a network link (claim 16) (*id.* at 31–32 (citing Ex. 1016, 5:55–58, 9:15–30 (creating multiple versions of an audio at different audio rates), 9:23–28, 10:45–54; Ex. 1036 (noting that the MPEG compression format is expressed in bits/s); Ex. 1007 ¶ 85 (p. 57) (Dr. Mir asserting that the different “audio rates” in Fuller “would be measured in bits per second”)))); and a delivery resource

that comprises a formatting engine for putting the segments into the claimed formats (claim 17) (*id.* at 21–23, 32 (citing Ex. 1016, 6:22–38, 9:15–19 (“[T]he real-time server 140 prepares the audio data by breaking the audio information into time periods. This audio information is also compressed into various sets of compressed data corresponding to different audio rates.”), 9:20–30, 9:49–63; Ex. 1007 ¶ 85 (pp. 36–39))).

Patent Owner does not specifically contest that Treyz and Fuller disclose the limitations of dependent claims 3–5 and 15–17.

Upon review of the record as a whole, we credit the testimony of Dr. Mir and find that Petitioner has demonstrated that the combination of Treyz and Fuller discloses the limitations of dependent claims 3–5 and 15–17 of the ’802 patent. And, because Petitioner also has set forth sufficient rationale to explain why one of ordinary skill in the art would have combined the disclosures of these references, Petitioner has demonstrated by a preponderance of the evidence that claims 3–5 and 15–17 would have been obvious over Treyz and Fuller.

F. Claims 9, 11, and 13 over Treyz, Fuller, and Glaser

Petitioner contends the subject matter of claims 9, 11, and 13 would have been obvious over Treyz, Fuller, and Glaser. Pet. 33–38.

1. Glaser

Glaser discloses a method for ensuring that the buffers of a CPU are “maintained at near maximum capacity without overflowing.” Ex. 1017, 16:1–5. In Glaser, one audio data bank contains audio data compressed according to a known compression algorithm, whereas a second audio data bank contains data compressed according to a lossless compression algorithm. *Id.* at 21:36–51. A switching system allows an audio control

center to switch alternately between the two audio banks. *Id.* at 21:51–55. For example, when a user’s computer determines that the buffers are near maximum capacity, the user’s PC sends a “high quality” signal to the audio control center to indicate that high quality data should be sent by the audio control center. *Id.* at 22:7–13. If the buffers subsequently fall beneath a certain percentage of maximum capacity, the user’s PC transmits a “normal quality” signal indicating that the audio control center should resume transmitting data from the normal quality audio bank. *Id.* at 22:58–64. According to Glaser, this process may be repeated multiple times “so that a net overall improvement of sound quality results.” *Id.* at 23:16–19.

2. Claim 9

Petitioner, supported by the testimony of Dr. Mir, persuasively identifies where every limitation of claim 9 is disclosed in the combination of Treyz, Fuller, and Glaser, including: receiving an HTTP communication at a media delivery resource that includes a request for a listing of network locations for segments of available media (Pet. 23–25, 35 (citing Ex. 1015, 21:8–14, 23:11–16; Ex. 1016, 8:30–34; Ex. 1007 ¶ 85 (p. 39–43, 50))); a device having a buffer, a non-volatile memory, and a collection of instructions stored in the non-volatile memory (*id.* at 35–36 (citing Ex. 1015, 1:47–51, 1:58–60; Ex. 1007 ¶ 85 (pp. 50–51))), the collection of instructions operable to: request a media segment (Pet. 23–26, 36; Ex. 1007 ¶ 85 (pp. 50–52)), consider an amount of information stored in a buffer (Pet. 36 (citing Ex. 1017, 16:1–40 (“the CPU 310 within the subscriber unit 110 constantly monitors the memory allocated within the buffer 315”)); Ex. 1007 ¶ 85 (pp. 50–52))), and request a different segment with a different formatting that allows the segment to be delivered at a different rate,

wherein the two rates are rates at which streaming media can be output (*id.* at 21–25, 36; Ex. 1016, 6:22–38, 9:15–19 (“the real-time server 140 prepares the audio data by breaking the audio information into time periods. This audio information is also compressed into various sets of compressed data corresponding to different audio rates.”), 10:11–17 (noting that the Java applet of Fuller may request “a lower rate corresponding to a lower audio or video signal that will more appropriately match the bandwidth of the client”); Ex. 1015, 21:8–14, Fig. 13; Ex. 1007 ¶¶ 82, 85 (pp. 36–39, 42–45, 50–52); *see also* Ex. 1015, Abstract (noting that the device of Treyz handles “streaming digital audio files”); Ex. 1016, Abstract (noting that the system of Fuller provides “streaming audio and video data to multiple users”)).

With respect to the reason to combine the three references, Petitioner notes that, although Fuller recognizes that a client may request a different rate of transmission if it is not receiving data at a sufficient rate, Fuller does not actually disclose how the client determines if it is receiving data at a sufficient rate. Pet. 33–34. Petitioner contends, therefore, that one of ordinary skill in the art, needing a method to monitor the rate at which the client in Treyz and Fuller is receiving data, would naturally look to known methods of buffer monitoring in the art, including the method disclosed in Glaser. *Id.* at 34, 36 (citing Ex. 1017, 3:39–45 (noting that “audio quality degradation may be compensated for through the data flow regulation of the present invention,” which “constantly maintains the buffers at or near maximum capacity”)).

Patent Owner contends the list of available media, or links, in Treyz “does not comprise links or network locations to *segments* of the same available media at different output rates as required by the claims.” PO

Resp. 26. We do not find this argument persuasive for the reasons set forth above for claim 1. *See supra* at 18.

Upon review of Petitioner's arguments and supporting evidence, we credit the testimony of Dr. Mir and find that the combination of Treyz, Fuller, and Glaser discloses every limitation of claim 9. Ex. 1007 ¶ 85 (pp. 49–53). We also find that Petitioner provides a reasoned explanation supported by rational underpinnings as to why one of ordinary skill in the art would have combined the disclosures of the three references. Pet. 33–34, 36. Thus, Petitioner has demonstrated by a preponderance of the evidence that claim 9 would have been obvious over Treyz, Fuller, and Glaser.

3. *Dependent Claims 11 and 13*

Claim 11 depends from claim 9 and further requires that “the compression format has an outputting characteristic that is measured in bits per second.” Ex. 1001, 19:37–39. Claim 13 also depends from claim 9 and requires organizing the plurality of segments to facilitate delivery, saving each of the plurality of segments such that each can be individually retrieved, and periodically sending a requested next segment to the device (claim 13). Ex. 1001, 19:43–20:2. Petitioner, supported by the testimony of Dr. Mir, identifies where Treyz, Fuller, and Glaser teach or suggest the subject matter of claims 11 and 13. Pet. 21, 28, 31–32, 37–38 (citing Ex. 1016, 5:55–58, 6:22–38, 9:14–30, 9:49–63, 10:11–17, 10:45–54; Ex. 1007 ¶ 85 (pp. 35–36, 46–47, 49–50, 53 (Dr. Mir testifying that the different audio rates formatted in Fuller “would be measured in bits per second”), 54 (Dr. Mir testifying that each of the plurality of segments in Fuller must be able to be individually retrieved, or the switching of data rates would not work), 57); Ex. 1036).

Patent Owner does not address Petitioner's arguments with respect to dependent claims 11 and 13.

Upon review of the record as a whole, we credit the uncontested testimony of Dr. Mir and find that the subject matter of claims 11 and 13 is disclosed in Treyz, Fuller, and Glaser. And, because Petitioner has provided a reasoned explanation as to why one of ordinary skill in the art would have sought to combine the disclosures of these references, Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claims 11 and 13 would have been obvious over Treyz, Fuller, and Glaser.

G. Claim 20 over Treyz, Fuller, and Hild

Claim 20 depends from claim 14 and further requires that the delivery resource be configured to recognize if a requesting device is a mobile device necessitating a delivery path that comprises at least one wireless link. Ex. 1001, 20:43–46.

Petitioner contends the subject matter of claim 20 would have been obvious over Treyz, Fuller, and Hild. Pet. 38–39. In particular, Petitioner contends that Hild discloses that a User Agent Profile, or UAProf, within the WAP (Wireless Application Protocol) suite may provide a header indicating whether an HTTP communication has been received from a wireless device. *Id.* (citing Ex. 1007 ¶ 85 (pp. 59–60); Ex. 1018, 1:62–2:6). And, according to Dr. Mir, “[b]ecause Treyz expressly discloses communicating over wireless devices and the Internet,” one of ordinary skill in the art would have sought to use the WAP, HTTP, and the UAProf methods disclosed in Hild in conjunction with the system of Treyz and Fuller, in order to identify whether a requesting device is a mobile device. Ex. 1007 ¶ 85 (pp. 59–60).

Patent Owner does not address Petitioner's arguments with respect to claim 20.

Upon review of Petitioner's arguments and supporting evidence, we credit the testimony of Dr. Mir and find that the combination of Treyz, Fuller, and Hild discloses the subject matter of claim 20. We also find persuasive Petitioner's argument that one of ordinary skill in the art would have sought to implement the functionality of Hild in the system of Treyz and Fuller, in order to allow the system to recognize whether a requesting device is a mobile device. Ex. 1007 ¶ 85 (pp. 59–60). Thus, Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claim 20 would have been obvious over Treyz, Fuller, and Hild.

H. Claims 1, 3–5, and 14–18 over the Production Guide

Petitioner contends the subject matter of claims 1, 3–5, and 14–18 would have been obvious over the Production Guide.¹⁰ Pet. 39–53.

1. Production Guide

The Production Guide is a manual for producing multimedia presentations using RealNetwork's RealSystem G2, described as "the most sophisticated system for streaming multimedia files across a network." Ex. 1026, 4.¹¹

¹⁰ The Petition requests review of claims 1, 3–5, 9–11, and 13–18 in view of the Production Guide and Glaser. Pet. 11, 39. For the reasons set forth in the Institution Decision, we declined to institute review of claims 9–11 and 13, and instituted review of claims 1, 3–5, and 14–18 only with respect to the Production Guide. Inst. Dec. 21, n.9, 22 n.10.

¹¹ Our citations are to the page numbers in the lower right corner of the document.

The Production Guide discloses two methods for supporting multiple bandwidth connections. *Id.* at 8, 25. In the first method, a user creates a single clip that targets different bandwidths. *Id.* at 25. This method, which uses “SureStream technology,” allows a single RealAudio music clip to be encoded “for up to six different bandwidths.” *Id.* A web page links to this single clip “and when a user clicks the link the RealPlayer and RealServer determine which encoding to use based on the available bandwidth.” *Id.* Subsequently, “[i]f a fast connection becomes bogged down because of high network traffic, RealServer seamlessly switches to a lower bandwidth encoding to prevent the presentation from stalling.” *Id.* at 26.

In the second method, when a user clicks on a website link, a file written in the Synchronized Multimedia Integration Language, or a SMIL file, is sent to the user. *Id.* at 15–16, 26. As shown in the example SMIL file reproduced below, this SMIL file contains a list of media clips that will be played in sequence, as well as their respective URL or network location. *Id.* at 50–52.

```
<smil>
  <body>
    <audio src="rtsp://realserver.company.com/one.rm"/>
    <audio src="rtsp://realserver.company.com/two.rm"/>
    <audio src="rtsp://realserver.company.com/three.rm"/>
  </body>
</smil>
```

In the Production Guide, “[a]udio, video, and animation have internal timelines,” with each frame corresponding to a specific point in a timeline. *Id.* at 14. The SMIL file may include timing elements that allow a user to use these internal timelines to manipulate playback of the clips. *Id.* at 15. In addition, “[t]o serve different clips to viewers with different connection speeds,” the Production Guide explains that a <switch> tag may be included

within the SMIL file. *Id.* at 60. An example <switch> tag is reproduced below:

```
<switch>
  <par system-bitrate="75000">
    <!--for dual isdn and faster-->
    <audio src="audiosong1.rm"/>
    <video src="videosong1.rm"/>
    <textstream src="lyricssong1.rt"/>
  </par>
  <par system-bitrate="47000">
    <!--for single isdn-->
    <audio src="audiosong2.rm"/>
    <video src="videosong2.rm"/>
    <textstream src="lyricssong2.rt"/>
  </par>
  <par system-bitrate="20000">
    <!--for 28.8 modems-->
    <audio src="audiosong3.rm"/>
    <video src="videosong3.rm"/>
    <textstream src="lyricssong3.rt"/>
  </par>
</switch>
```

As shown in this example, the <switch> tag allows one to “define options that each RealPlayer can choose” based on defined criteria. *Id.* at 60, 108 (using a <switch> tag to choose between French and English language audio files). RealPlayer then evaluates these available options in the order listed. *Id.* For example, in the SMIL file reproduced above, RealPlayer will evaluate bandwidth options from highest (75000) to lowest (20000), and will select the first viable option. *Id.* The Production Guide explains, however, that “[b]ecause each connection speed uses a different set of clips, RealServer cannot switch between the different encodings as it can with a single SureStream clip.” *Id.* at 26.

2. Claims 1 and 3–5

Petitioner, supported by the testimony of Dr. Mir, persuasively explains where the Production Guide teaches or suggests the subject matter of claim 1, including: organizing an audio or video clip into segment files to

facilitate streaming delivery (Pet. 41; Ex. 1026, 14–15 (noting that each video clip is broken into frames that correspond to a specific point in a timeline), 18, 26, 60–61 (providing links with the SMIL file to various clips encoded at different rates); Ex. 1007 ¶ 92 (pp. 63–64) (Dr. Mir testifying that “each of the available encodings in the RealPlayer system must be organized into a plurality of independent segment files to permit streaming media delivery”)), formatting the segment files at different rates in order to create multiple versions of a particular clip available for delivery at different rates (Pet. 41–42; Ex. 1026, 15–16, 25 (“you create separate clips for each bandwidth target”), 50, and 59–60 (“When you assemble your presentation, you use a SMIL file to designate a bandwidth connection for each of the different groups.”); Ex. 1007 ¶ 92 (pp. 64–66)), using a Web browser to request access to clips, or an available media, using the HTTP protocol (Pet. 42–43; Ex. 1026, 93 (“Using the HTTP protocol, the Web browser requests the SMIL file from RealServer.”); Ex. 1007 ¶ 92 (pp. 68–70)), generating and providing a list—in the form of a SMIL file—to a user that contains network locations for each of the encoded clips (Pet. 42–43; Ex. 1026, 26, 59–60, 93; Ex. 1007 ¶¶ 89, 92 (pp. 66–70)), and sending first and second segments (Pet. 43–45 (citing Ex. 1026, 26–27 (“RealPlayer chooses which clip to receive based on its connection speed and the SMIL file’s bandwidth parameters.”), 93 (“RealPlayer requests and receives the streaming media clips.”); Ex. 1007 ¶ 92 (pp. 71–74))).

Claims 3–5 depend, directly or indirectly, from claim 1. Ex. 1001, 18:48–61. Petitioner, supported by the testimony of Dr. Mir, also persuasively demonstrates where the Production Guide teaches or suggests the subject matter of these claims, including: maintaining the plurality of

independent segment files within a storage medium in a format that is configured to facilitate an outputting at a playback device at or near the chosen rate (claim 3) (Pet. 45–46; Ex. 1026, 11, 17 (disclosing that a presentation is hosted on a server); Ex. 1007 ¶ 92 (pp. 74–75)); a method wherein the available media is a video and the HTTP communication is received from a device having an internal battery, recharging circuit, display, and an application for outputting the video on the display of the device (claim 4) (Pet. 42; Ex. 1026, 21–23 (disclosing that RealPlayer is loaded onto a user’s computer), 36–42 (disclosing the communication of video media); Ex. 1007 ¶ 92 (pp. 75–76) (Dr. Mir testifying that one of ordinary skill in the art would have understood that a computer may include a laptop computer, which would include an internal battery, recharging circuit, display, and the RealPlayer application)); and providing a link to available media on a website (claim 5) (Pet. 47; Ex. 1026, 93 (“With your clips on RealServer, link your Web page to the SMIL file with an HTML hypertext link that looks like this:”); Ex. 1007 ¶ 92 (pp. 76–77)).

Patent Owner contends independent claim 1 would not have been obvious over the Production Guide, because it does not disclose using the SMIL file to switch “bitrates midstream.” PO Resp. 29 (“But Netflix ignores additional disclosures which explicitly state that a SMIL file cannot be used to ‘switch between the different encodings.’”). Patent Owner does not explain, however, why claim 1 requires midstream bitrate switching. In particular, Patent Owner does not explain why claim 1 requires any particular timing for the two sending steps, or why claim 1 would preclude sending the different segments to different users having different connection speeds. Pet. Reply 6 (“As the Board noted, Affinity’s argument regarding

the SMIL file is based on reading limitations into the claims that are neither recited nor required.”). Thus, we do not find Patent Owner’s argument persuasive.

Upon review of the record as a whole, we credit the testimony of Dr. Mir and find that the Production Guide discloses the limitations of claims 1 and 3–5. Thus, we find that Petitioner has demonstrated by a preponderance of the evidence that the subject matter of claims 1 and 3–5 of the ’802 patent would have been obvious over the Production Guide.

3. Claims 14–18

Petitioner, supported by the testimony of Dr. Mir, persuasively explains where the Production Guide teaches or suggests the subject matter of independent claim 14, including: a media available for delivery as a series of segments (Pet. 50–51; Ex. 1026, 14, 18, 59–60, 71; Ex. 1007 ¶ 92 (pp. 63–64 (asserting that each clip is an independent segment file and noting that segments of these clips may be individually located using timing commands in a SMIL file), 83)); configuring these segments to allow for their delivery to a requesting device via network links capable of communicating information at first and second rates (Pet. 41–44 (citing Ex. 1026, 15–16, 25, 50, 59–60, 93; Ex. 1007 ¶ 92 (pp. 64–72)), 50–52); a playlist for the available media that includes different network locations for the files representing first and second segments (Pet. 42, 51; Ex. 1026, 26, 50–51 (noting that the SMIL file may contain network links for each song or clip on the list), 59–60 (noting that the SMIL file may contain a list of URLs for each of the bandwidth encodings); Ex. 1007 ¶ 92 (pp. 66–68)); and a delivery resource configured to respond to a plurality of file requests by transmitting information to the requesting device in a manner that facilitates

a continuous outputting of the available media by the requesting device (Pet. 43–44, 51; Ex. 1026, 11 (explaining that RealSystem G2 streams audio or video over a network), 15 (noting that SMIL file timing commands allow “starting one clip as soon as another one stops”), 26–27, 50 (“In its simplest form, a SMIL file lists multiple media clips played in sequence.”), 59–60; Ex. 1007 ¶ 92 (pp. 83–84)).

Claims 15–18 depend, directly or indirectly, from claim 14. Ex. 1001, 20:20–38. Petitioner and Dr. Mir persuasively explain where the Production Guide discloses the subject matter of these claims, including: segments encoded at different rates (one higher than the other) (claim 15) (Pet. 51–52; Ex. 1026, 26–27; Ex. 1007 ¶ 92 (pp. 84–85)); a segment that is in a “format that is designed to be output at or below a given rate measured in bits per second” and “configured to allow delivery to the requesting device via the network link” (claim 16) (Pet. 52; Ex. 1026, 26 (noting that clips may include a “high-bandwidth choice and a low-bandwidth choice”), 27, 59–60; Ex. 1007 ¶ 92 (pp. 85–86) (noting that the Production Guide discloses transmitting clips formatted at 8 Kbps and 14.4 Kbps, i.e., clips that are formatted at rates measured in bits per second)); a formatting engine that “puts the given one of the segments into the format” (claim 17) (Pet. 41–42, 46, 50–53 (citing Ex. 1026, 11, 15–16, 19, 21, 25–27, 50, 59–60; Ex. 1007 ¶ 92 (pp. 64–65, 86–87))); and wherein the media available for delivery is a video which may “be continuously output,” and wherein the device “periodically requests a next file” (claim 18) (Pet. 52–53 (citing Ex. 1026, 11, 19, 21, 50 (“In its simplest form, a SMIL file lists multiple media clips played in sequence.”); Ex. 1007 ¶ 92 (pp. 87–90))).

Patent Owner asserts that claim 14 would not have been obvious over the Production Guide because it does not disclose midstream rate switching. PO Resp. 29–30. Claim 14 recites that the segments are configured to allow delivery via a “*network link capable of communicating information at a first rate*” and a link “*capable of communicating information at a different rate.*” Ex. 1001, 20:6–11 (emphases added). Patent Owner does not explain why this claim language requires that the *segments* actually be configured at different rates. Nor is there any dispute that the communications links disclosed in the Production Guide are capable of communicating the disclosed clip data at different rates. See, e.g., Ex. 1026, 16 (disclosing the use of dual-ISDN and T1 connections using the SMIL file embodiments), 60 (noting that “RealPlayer evaluates options in the order listed, selecting the first viable option even if subsequent options suit it better. So if the 28.8 Kbps option is first, a RealPlayer with a dual-ISDN connect will chose that option because it is the first viable option listed.”).

Moreover, even if claim 14 (or claim 1) required that segments be formatted at different rates and sent to the same user, this is taught or suggested in the Production Guide. Ex. 1026, 50, 59–60. In particular, the SMIL file may provide a media that is composed, for example, of three different clips, or segments, each of which has a different network location and is formatted for delivery at multiple bit rates. *Id.* at 50, 52, 59–60. And, although the SMIL file example provided above would not switch rates between clips for a user with a fixed bitrate connection, the Production Guide discloses that the <switch> tag may provide different bandwidth options for each clip; therefore, each clip identified on the SMIL file need not play at the same rate as the previous clip, even for a user with a fixed

bitrate connection. Pet. Reply 8–10 (asserting that the SMIL file can switch rates between each segment, or clip, listed on the SMIL file); Ex. 1026, 108–109; Ex. 1007 ¶ 92 (pp. 89–90) (testifying that the <switch> tag could be embedded within a sequence of clips within a SMIL file).

Based on the foregoing, and upon review of Petitioner’s and Patent Owner’s arguments and supporting evidence as a whole, we credit the testimony of Dr. Mir and find that the Production Guide teaches or suggests the subject matter of claims 14–18. Thus, Petitioner has demonstrated by a preponderance of the evidence that claims 14–18 would have been obvious over the Production Guide.

I. Claim 20 over the Production Guide and Hild

Petitioner contends the Production Guide discloses streaming media over the Internet and Hild discloses using the WAP and HTTP standards (including UAProf) to recognize whether a requesting device is a mobile device requiring a wireless link. Pet. 53–54. Petitioner further contends that, because the Production Guide discloses that the described system is intended to “reach a wide audience over the Internet,” one of ordinary skill in the art would have sought to implement the WAP protocol suite, including its “UAProf” method, within the Production Guide to allow wireless devices to connect to the Internet and access the content disclosed in the Production Guide. *Id.*

Patent Owner does not address Petitioner’s arguments with respect to claim 20.

Upon review of the record as a whole, we are persuaded that Petitioner has identified where each limitation of claim 20 is taught or suggested by the Production Guide and Hild. Pet. 53–54. We also find

persuasive Petitioner’s argument that one of ordinary skill in the art would have incorporated the WAP, HTTP, and UAProf methods described in Hild in the system of the Production Guide, in order to recognize when a requesting device is a mobile device. Accordingly, Petitioner has demonstrated by a preponderance of the evidence that claim 20 would have been obvious over the Production Guide and Hild.

III. CONSTITUTIONAL CHALLENGE

Patent Owner contends the “Board should vacate the institution decision because Affinity’s right to a jury trial under the Seventh Amendment has been eviscerated by Congress’s establishment of *inter partes* review as a quick and cheap alternative means of litigation.” PO Resp. 8. The Federal Circuit has rejected this argument, *MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284, 1291 (Fed. Cir. 2015), *cert. denied* 137 S. Ct. 292 (2016), and, in any event, the Board lacks authority to rule on the constitutionality of *inter partes* review proceedings. Thus, we do not address further Patent Owner’s constitutionality arguments.

IV. ORDER

It is hereby:

ORDERED that claims 1, 3–5, 9, 11, 13–18, and 20 of the ’802 patent are unpatentable;

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

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