

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 IPR2017-00122
Patent 9,444,868 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 1, “Pet.”) requesting *inter partes* review of claims 1–20 of U.S. Patent No. 9,444,868 B2 (Ex. 1001, “the ’868 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 1–20 of the ’868 patent. Paper 10, 16 (“Institution Decision” or “Inst. Dec.”). Thus, we instituted *inter partes* review with respect to those claims. *Id.*

Following the institution of trial, Patent Owner filed a Patent Owner Response (Paper 12, “PO Resp.”) that was essentially identical to its Preliminary Response, and Petitioner filed a Reply (Paper 13, “Pet. Reply”). An oral hearing was held on December 21, 2017, and a transcript of the oral hearing is included in the record. Paper 26 (“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 ’868 patent, as well as related U.S. Patent No. 9,094,802 (“the ’802 patent”), are at issue in *Affinity Labs of Texas, LLC v. Netflix, Inc.*, 1:15-cv-849-RP (W.D. Tex.). Pet. 3; Paper 7, 1. The parties

further note that the '802 patent is at issue in IPR2016-01701. Pet. 3; Paper 7, 1.

C. The '868 Patent

The '868 patent is directed to a delivery system for digitally stored content, including audio, video, and textual information. Ex. 1001, 1:25–27, 3:20–22, 3:52–57. The '868 patent instructs that this information may be “formatted, segmented, compressed, modified, etc.” during communication to a user. *Id.* at 3:28–31. In one embodiment of the '868 patent, the selected audio information may be wirelessly communicated using a “hybrid of wireless communication rates.” *Id.* at 6:12–15. 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 6:12–19. Slower communication speeds may then be used to communicate additional selected audio information to the device. *Id.* at 6:19–22.

D. Illustrative Claim

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

1. A media system, comprising:

a plurality of independent segment files, wherein a given segment file of the plurality of independent segment files has a given format and a different segment of the plurality of independent segment files has a different format, further wherein the given format facilitates an outputting of information in the given segment file at a given rate that is different than a rate associated with the different format;

a playlist that comprises a list, and the list includes a first URL for the given segment file and a different URL for the different segment file;

a network-based communication system operable: to distribute media content to a remotely located requesting device; to receive an HTTP communication from the remotely located requesting device that indicates a desire to access the available media; to send information representing the playlist to the remotely located requesting device; to send information representing the given segment file to the remotely located requesting device; and, to send information representing the different segment file to the remotely located requesting device; and

a plurality of remote devices configured to request media, wherein each of the plurality of remote devices comprises: (1) an internal memory system; (2) a collection of instructions stored in the internal memory system that is operable when executed to utilize information representing the playlist, to request a streaming delivery of the information representing the given segment file, and to request a streaming delivery of the information representing the different segment file; and (3) a buffer configured to output the information representing the given segment file at the given rate and to output information representing the different segment file at the rate, which is different than the given rate

Ex. 1001, 18:56–19:24.

E. Instituted Grounds of Unpatentability

We instituted trial on the following grounds (Inst. Dec. 16):

References	Basis	Claims Challenged
Treyz ¹ and Fuller ²	§ 103	1–12, 14, 15, and 17–20
Treyz, Fuller, and Glaser ³	§ 103	13 and 16

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).

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).

Petitioner proposes constructions for the terms “segment files,” “cellular telephone,” and “a different segment”/“the given segment.” Pet. 7–9. Patent Owner does not propose express constructions for the terms identified by Petitioner or any additional claim terms.

Upon review of the record as a whole, we determine that the terms “available media” and “segment file” require express construction.

available media

Independent claims 1, 7, and 14 require an “available media.” Ex. 1001, 19:5, 19:49–50, 20:54. 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, such as songs or stations in a playlist,” 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). 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 ’868 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. *See 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 ’868 patent. Thus, upon review of the record as a whole, we construe an “available media” to include “content accessible from a source of audio, video, and/or textual information,” and note 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.⁴

⁴ This construction is consistent with that provided in the Institution Decision, but incorporates the full construction of “available media”

segment files

Independent claims 1 and 7 require “a plurality of independent segment files” and claim 14 requires “a plurality of media segment files associated with the available media.” Ex. 1001, 18:57, 19:49, 20:58–59.

Petitioner contends the “segment files” recited in the challenged claims may comprise “a file that includes part of the content accessible from a source of audio, video, or textual information, such as songs or stations in a playlist or parts of an Internet radio broadcast.” Pet. 7–8 (citing Ex. 1007 ¶¶ 65–66). Patent Owner contends the claimed “segment files” must be “**segments** of the same available media,” such as an individual song or video. PO Resp. 27; *see id.* at 22 (“Independent claims 1, 7, and 14 each require a list or listing that contains a URL or network location for segments of an available media, such as a song or video, which is available at different output rates.”).

The written description of the ’868 patent notes that “an audio file may be formatted, segmented, compressed, modified, etc. for the purpose of providing or communicating the audio invention.” Ex. 1001, 3:28–31. This disclosure supports a construction of “segment files” that includes portions of an individual audio file. As noted above, however, the term “available media” is not limited to an individual song or video file, and when the “available media” includes a collection of songs, videos, and/or Internet broadcasts, 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

provided in IPR2014-00407. Inst. Dec. 6; IPR2014-00407, slip. op. at 6 (determining that “an available media” includes “content accessible from a source of audio, video, and/or textual information”).

include files representing individual songs, videos, or Internet radio station content within this collection. Ex. 3001; Ex. 3002. The parties direct us to no portion of the claims, written description, or prosecution history of the '868 patent that would suggest this construction is overbroad or otherwise unreasonable.⁵ Thus, we determine that the broadest reasonable construction of the terms “segment files” and “independent segment files,” when used in conjunction with the terms “media” or an “available media,” includes files that represent part of the content accessible from a source of audio, video, or textual information, such as files that represent individual songs, videos, and/or Internet radio stations within a broader collection of audio or video files, as well as files that represent part of a single song, video, or Internet broadcast.⁶

B. Alleged Failure to Provide Proposed Claim Constructions

Patent Owner asserts that during proceedings before the district court Dr. Mir testified that the terms “segment files” and “independent segment files” are “confusing” and require one to “guess” as to their meaning and that one of ordinary skill in the art “would not understand with reasonable certainty what is being claimed” by the term “independent segment files.” PO Resp. 18–19 (citing Ex. 2001 ¶¶ 52, 56; Ex. 2003, 176:21-177:16).

⁵ During oral argument, Patent Owner’s counsel indicated that it has “not taken a position on what independent segment files means in this proceeding,” other than its assertion that these files are of the same media. Tr. 31:12–32:5.

⁶ This construction is consistent with that provided in the Institution Decision. Inst. Dec. 11 (noting that the term “segment” is “broad enough to encompass an individual song, video, or station contained within a broader collection of audio or video files”).

Patent Owner also asserts that Petitioner argued before the district court that several claim terms of the '868 patent are set forth in means-plus-function format, yet Petitioner failed to identify corresponding structure in this proceeding for these alleged mean-plus-function claim terms. *Id.* at 19–21. According to Patent Owner, “[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 “[Petitioner’s] failure to identify a function and corresponding structure, or otherwise identify the scope and meaning” of the alleged mean-plus-function claim terms, “requires rejection of their obviousness arguments.” *Id.* at 19, 21.

We are not persuaded by these arguments. First, the district court has determined that the claims of the '868 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 6–7. Nor does Patent Owner contend that the prior art of record fails to disclose any of the claim limitations in question (“collection of instructions” and “engine”), whether construed as means-plus-function claim terms or not. *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 under the claim construction standard applicable in the district court, Petitioner and Dr. Mir, applying the broadest reasonable construction standard in this proceeding, and considering the construction of “available media” and “portions of an available media” set forth in IPR2014-

00407, correctly concluded that the terms “segment files” and “independent segment files,” when considered in combination with the term an “available media,” are broad enough to include individual songs or videos within a broader media collection. Pet. 7–8, 18–19, 38–39, 52–53. Patent Owner does not explain persuasively why Petitioner’s and Dr. Mir’s constructions, either express or implied, for “segment files,” “independent segment files,” and “available media” in the Petition are incorrect, or why their identifications as to where these elements are disclosed in Treyz and Fuller are erroneous or unsupported by the evidence of record.⁷ Thus, we do not consider Dr. Mir’s prior testimony to be grounds for denying the Petition or for ignoring his uncontested testimony with respect to the claim terms in question. Pet. Reply 8 (“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;

⁷ Patent Owner did not depose Dr. Mir or present declaration testimony to rebut his opinions in this case.

(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 had “a Bachelor’s Degree in Electrical Engineering, Computer Science or Computer Engineering, or equivalent experience, and one to two years of experience in the field of computer networking and/or multimedia networks, particularly as those systems relate to media streaming technology.” Pet. 11 (citing Ex. 1007 ¶ 41). Patent Owner does not address the level of ordinary skill in the art.

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 1–12, 14, 15, and 17–20 over Treyz and Fuller

Petitioner contends the subject matter of claims 1–12, 14, 15, and 17–20 would have been obvious over Treyz and Fuller. Pet. 12–62.

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 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.

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

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:

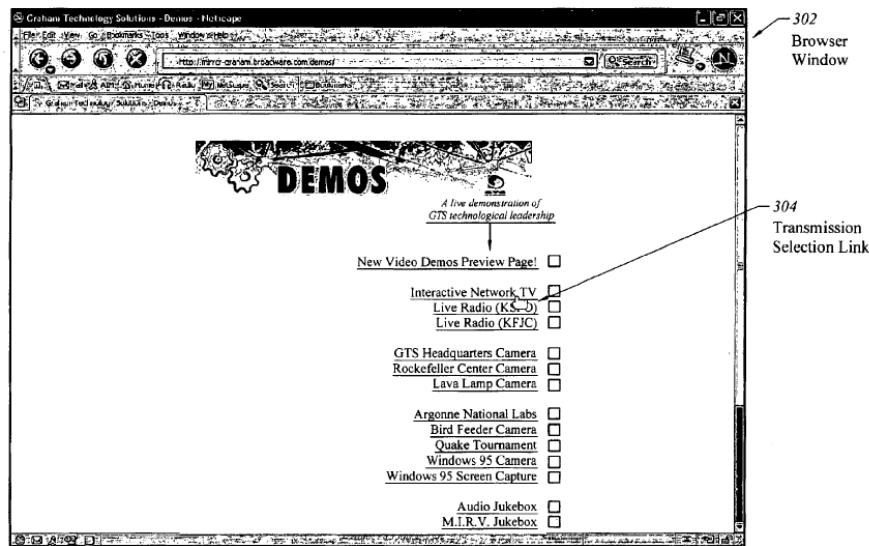


Figure 3 “illustrates a web page that a user can use to access a streaming audio and video broadcast” (*id.* at 3:41–42).

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. Analysis—Independent Claims 1, 7, and 14

Petitioner provides detailed analysis, supported by the testimony of Dr. Mir, identifying where the combination of Treyz and Fuller discloses the subject matter of independent claims 1, 7, and 14. Pet. 18–35, 38–46, 52–55. For example, with respect to independent claim 1, Petitioner persuasively identifies the “downloaded audio files and streaming digital audio files” of Treyz, which are received from a variety of independent sources and may include “radio station content, e-mail, news and other audio content,” as the “plurality of independent segment files.” *Id.* at 18–19 (citing Ex. 1015, 3:45–55, Figs. 1, 14, Abstract; Ex. 1007 ¶ 91). Petitioner also persuasively identifies the organized list of Internet radio stations in Treyz as the claimed “playlist,” and explains that Internet addresses, or URLs, are included for each station on the playlist. *Id.* at 25–26 (citing Ex.

1015, 3:45–55, 4:50–5:3, 5:32–36, 5:49–59, 7:57–61, 8:41–46, 11:53–61, 17:25–43, 20:11–22, 21:41–45, 23:10–16, Figs. 5, 9a, 9b, 10a; Ex. 1007 ¶ 101 (Dr. Mir testifying that links and Internet network addresses would be understood by one of ordinary skill in the art to be a URL)).

Petitioner also persuasively demonstrates that two different segments of available media in Treyz and Fuller may have different formats that would result in outputting of the audio and video information at different rates. *Id.* at 19–23. First, Fuller discloses formatting audio data “into various sets of compressed data corresponding to different audio rates” and switching between these compressed audio and video files based upon the rate at which the information is being received by the client. *Id.* at 22–23 (citing Ex. 1016, 5:63–67 (noting audio can be formatted in the G.711 and G.723 audio compression formats), 9:13–30 (describing the compression of audio information into various audio rates), 10:11–17 (“If it is the case that the audio, or the video, information is not being received by the client 112 at a sufficient data rate, the corresponding Java applet . . . can request a lower rate corresponding to a lower audio or video signal, that will more appropriately match the bandwidth available of the client 112.”)). Second, Treyz discloses a playlist of available media that contains both audio and video segments, and Petitioner persuasively explains that audio and video segment files would have different formats that “would result in different output rates from a buffer.” *Id.* at 23 (citing Ex. 1016, 5:66 (noting that audio may be compressed using G.711 and G.723 formats), 6:28 (noting that video data is formatted as a JPEG file); Ex. 1007 ¶¶ 52, 99).

With respect to the reason to combine Treyz and Fuller, Petitioner contends that both references “concern the delivery of streaming multimedia

content over an Internet-based client/server network” and that one of ordinary skill in the art would have been motivated to incorporate Fuller’s rate switching method in Treyz in order to prevent the input buffer from running out of data. Pet. 15–16 (asserting that a person of ordinary skill in the art would have understood that “if the client does not receive sufficient data, the input buffer for the audio/video decoders may run out of data, and hence the decoders would have nothing to output”); *see also id.* at 18 (asserting that the combination of Treyz and Fuller is merely the combination of two elements, each performing the same function as it does separately, to yield predictable results). Petitioner also contends that one of ordinary skill in the art would have found it “obvious to provide the web browser of Treyz’s device with HTTP capabilities, as is expressly taught in Fuller, in order to provide a platform-independent solution.” *Id.* at 17.

Patent Owner does not contest that one of ordinary skill in the art would have sought to combine the teachings of Treyz and Fuller, but contends independent claims 1, 7, and 14 would not have been obvious over Treyz and Fuller because the Internet radio links of Treyz do “not comprise links or network locations to *segments* of the same available media at different output rates as required by the claims.” PO Resp. 27; *see also id.* at 22 (asserting that independent claims 1, 7, and 14 “each require a list or listing that contains a URL or network location for segments of an available media, such as a song or video, which is available at different output rates”). We are not persuaded by Patent Owner’s argument.

Treyz discloses allowing a user to scroll through a list of songs, videos, and Internet radio stations that are available from one or more sources and then schedule how “portions or segments of the audio” from

these various sources are to be played. Pet. 18–19, 25–26 (citing Ex. 1015, 2:41–44, 3:45–55, 17:25–43, 20:11–22 (“The user may schedule how portions or segments of the audio from various sources are to be played.”), Figs. 9a, 9b, 14). Fuller discloses compressing selected audio and video information using different compression formats, which results in files that are available at different output rates. *Id.* at 21–23 (citing Ex. 1016, 5:63–67, 9:14–30); Ex. 1007 ¶ 99 (Dr. Mir testifying that video is typically encoded at a higher bitrate than audio). Thus, contrary to Patent Owner’s arguments, Petitioner and Dr. Mir persuasively demonstrate that the links in the Treyz and Fuller combination are to segments of the same available media that are available at different output rates.

Patent Owner also argues that Petitioner and Dr. Mir improperly incorporate by reference the Board’s prior decisions in IPR2014-00407 and IPR2014-00408 to support their argument that “the list and message limitations are met by the prior art.” PO Resp. 28–29 (citing Pet. 25–26; Ex. 1007 ¶ 101). We are not persuaded by this argument because, in addition to its citations to the Board’s prior decisions and Dr. Mir’s testimony, Petitioner provides numerous citations showing where the list and message limitations are disclosed in Treyz and Fuller. *See, e.g.*, Pet 25–26 (citing Ex. 1015, 3:45–55, 4:50–5:3, 5:49–59, 7:57–61, 8:41–46, 11:53–61, 17:25–43, 20:11–22, 21:41–45, 22:7–18, 23:10–16, Figs. 5, 9a, 9b, 10a; Ex. 1016, 8:42–58), 28–29 (citing Ex. 1007 ¶ 107).

During oral argument, Patent Owner asserted that Petitioner has failed to explain where the Treyz and Fuller combination discloses a “file.” Tr. 47:11–50:7. This argument was not presented in the Patent Owner Response and is waived. Paper 11, 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 persuasive, un rebutted evidence that the audio and video information of Treyz and Fuller is in the form of “files.” Ex. 1015, Abstract (“An alarm clock radio is provided that handles downloaded audio files and streaming digital audio files.”); Ex. 1016, 9:13–30 (Fuller disclosing segmenting audio information into time periods and storing this information in memory), 9:58–63 (formatting a video into JPEG frames and transmitting this information as “part of a multipart MIME encoded file”); Ex. 1007 ¶¶ 91–92; *see also* 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 the record as a whole, we find that Petitioner has identified where Treyz and Fuller teach or suggest every limitation of independent claims 1, 7, and 14. Pet. 18–35 (claim 1), 38–46 (claim 7), 52–55 (claim 14). And, because this analysis is reasonable and supported by evidence of record, we adopt it as our own. We also find that Petitioner has provided persuasive reasoning supported by record evidence to explain why one of ordinary skill in the art would have sought to combine Treyz and Fuller to arrive at the subject matter of the challenged claims, e.g., to prevent the input buffer of Treyz from running out of data and to “provide for efficient use of transmission bandwidth and improved quality of the streaming media transmission.” *Id.* at 15–16. Thus, Petitioner has

demonstrated by a preponderance of the evidence that the subject matter of independent claims 1, 7, and 14 would have been obvious over Treyz and Fuller.

4. *Analysis—Dependent Claims 2–6, 8–12, 15, and 17–20*

Dependent claims 2, 5, 8, and 9 require that “the available media” is “a video.”⁸ Ex. 1001, 19:25–27, 19:37–39, 20:11–26. Petitioner persuasively demonstrates that the customized playlist of Treyz may contain URLs or network locations for “news,” which Treyz explains may be provided to a user in the form of text, audio, or video. Pet. 12–13, 25–26, 35, 37, 47–48 (citing Ex. 1015, 8:35–40, 8:64–66 (noting that news information “may be in the form of text, audio, and video”), 9:4–6, 13:30–41, 14:43–48, 17:25–43 (noting that the Internet radio stations of Treyz may include “news” content), 21:50–51, 22:19–24, 23:14–16, 24:6–12, 24:25–30, 25:65–26:3, 26:54–62, Figs. 1, 2, 4, 14, Abstract).

With respect to dependent claims 3, 4, 6, 10–12, 15, and 17–20, Petitioner and Dr. Mir provide detailed arguments and citations to record evidence to show where the combination of Treyz and Fuller discloses the subject matter of these claims. Pet. 35–38, 49–51, 55–62; Ex. 1007 ¶¶ 120, 121, 122, 125–128, 153, 154–157, 168–171, 174–183.

⁸ As a general rule, the indefinite article “a” or “an” carries the meaning of “one or more” in open-ended “comprising” claims. *See Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008). In the Institution Decision, we invited Patent Owner to explain why this general rule should not apply to the term “a video,” as recited in the challenged claims. Inst. Dec. 12. Patent Owner declined this opportunity. Accordingly, we apply the general rule that the term “a video,” as used in dependent claims 2, 5, 8, and 9, encompasses “one or more” videos.

Patent Owner does not address Petitioner's arguments with respect to dependent claims 2–6, 8–12, 15, and 17–20 in its Patent Owner Response.

Upon review of Petitioner's arguments and supporting evidence, which we adopt as our own, we find that the combination of Treyz and Fuller discloses the subject matter of claims 2–6, 8–12, 15, and 17–20. We also find, for the reasons set forth above, that Petitioner has persuasively explained why one of ordinary skill in the art would have combined the disclosures of the two references. Thus, Petitioner has demonstrated by a preponderance of the evidence that the subject matter of dependent claims 2–6, 8–12, 15, and 17–20 would have been obvious over Treyz and Fuller.

F. Claims 13 and 16 over Treyz, Fuller, and Glaser

Petitioner contends the subject matter of claims 13 and 16 would have been obvious over Treyz, Fuller, and Glaser. Pet. 63–66.

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 one embodiment of Glaser, a first 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. 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. Then, if the buffers 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. Analysis

Claim 13 requires considering the amount of buffer fill within an internal buffer before requesting a “different segment file,” and claim 16 requires considering the amount of buffer fill when determining which additional media segment files to request. Ex. 1001, 20:44–48, 21:15–20.

Petitioner persuasively demonstrates that the combination of Treyz, Fuller, and Glaser teaches or suggests considering the amount of buffer fill before requesting a different segment file and when determining which additional media segment files to request. Pet. 65–66 (citing Ex. 1017, 16:1–40, 21:5–35 (considering the fill of the buffer before requesting either “high quality data compressed according to a lossless compression algorithm” or “normal quality data”); Ex. 1016, 9:17–28; Ex. 1007 ¶¶ 158–159, 173); *see also* Ex. 1016, 10:11–17 (“If it is the case that the audio, or the video, information is not being received by the client 112 at a sufficient data rate, the corresponding Java applet . . . can request a different rate of transmission.”)). With respect to the reasons to combine the three references, Petitioner persuasively argues that, because Fuller discloses changing transmission rates when the client is not receiving data at a “sufficient rate,” but does not disclose “how a client should determine whether it is receiving data at a ‘sufficient rate,’” a person of ordinary skill in the art would have sought to implement Glaser’s buffer monitoring method in Treyz and Fuller. *Id.* at 64.

Patent Owner does not address Petitioner's arguments with respect to claims 13 and 16 of the '868 patent.

Because Petitioner persuasively identifies where the combination of Treyz, Fuller, and Glaser discloses the subject matter of claims 13 and 16, and persuasively explains why one of ordinary skill in the art would have sought to combine the three references, Petitioner has demonstrated by a preponderance of the evidence that claims 13 and 16 of the '868 patent would have been obvious over Treyz, Fuller, and Glaser.

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 further address Patent Owner's constitutionality arguments.

IV. ORDER

It is hereby:

ORDERED that claims 1–20 of the '868 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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PETITIONER:

Hector Ribera
David D. Schumann
MARTON RIBERA SCHUMANN & CHANG LLP
hector@martonribera.com
david@ martonribera.com

PATENT OWNER:

Ryan M. Schultz
Ryan E. Dornberger
Shui Li
ROBINS KAPLAN LLP
RSchultz@RobinsKaplan.com
RDornberger@RobinsKaplan.com
SLi@RobinsKaplan.com