

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMCAST CABLE COMMUNICATIONS, LLC,
Petitioner,

v.

ROVI TECHNOLOGIES CORPORATION,
Patent Owner.

Case IPR2019-00284
Patent 9,578,363 B2

Before KARL D. EASTHOM, LYNNE E. PETTIGREW, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

PETTIGREW, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner, Comcast Cable Communications, LLC, filed a Petition for *inter partes* review of claims 1–20 of U.S. Patent No. 9,578,363 B2 (Ex. 1001, “the ’363 patent”). Paper 2 (“Pet.”). Patent Owner, Rovi Technologies Corporation, filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

Under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to institute an *inter partes* review if “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). After considering the evidence and arguments in the Petition and Preliminary Response, we conclude that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of the challenged claims of the ’363 patent. Accordingly, we institute an *inter partes* review of claims 1–20 of the ’363 patent with respect to all unpatentability grounds asserted in the Petition. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (“We read . . . the SAS opinion as interpreting the statute to require a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition . . .”).

II. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies the following real parties-in-interest: Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications,

LLC; Comcast Holdings Corporation; Comcast Shared Services, LLC; Comcast of Santa Maria, LLC; Comcast of Lompoc, LLC; Comcast Financial Agency Corporation; and Comcast STB Software, LLC. Pet. 1. Patent Owner names the following real parties-in-interest: Rovi Technologies Corporation; Rovi Guides, Inc.; and Rovi Corporation. Paper 4, 1 (Patent Owner's Mandatory Notices).

B. Related Matters

The parties state that the '363 patent has been asserted in *Rovi Guides, Inc. v. Comcast Corporation*, No. 2:18-cv-00253 (C.D. Cal.), filed January 10, 2018. Paper 7, 1 (Petitioner's Updated Mandatory Notices); Paper 4, 1. The parties also state that the '363 patent is involved in a U.S. International Trade Commission investigation, *In the Matter of Certain Digital Video Receivers and Related Hardware and Software Components*, Inv. No. 337-TA-1103 (ITC), filed February 8, 2018. Paper 7, 1; Paper 4, 1. According to Petitioner, however, Rovi subsequently moved to terminate the portions of the ITC investigation relating to the '363 patent. Paper 7, 1.

On February 21, 2019, Patent Owner filed Reissue Application No. 16/282,142 requesting reissue of the '363 patent. *See* Paper 10, 1 (Patent Owner's Updated Mandatory Notices).

In addition to the instant Petition, Petitioner filed five other petitions (IPR2019-00285, IPR2019-00286, IPR2019-00287, IPR2019-00288, and IPR2019-00289) requesting *inter partes* review of claims 1–20 of the '363 patent. *See* Paper 7, 2; Paper 4, 1.

C. The '363 Patent

The '363 patent relates generally to techniques for accessing content, such as cable or satellite television programs. *See* Ex. 1001, 1:14–21. In

one embodiment described in the '363 patent, a client device may determine dynamically which version of content to select and display. *Id.* at 8:28–30. For example, a house may support two high-definition (HD) streams and two standard-definition (SD) streams at one time. *Id.* at 8:30–32. When the client device receives a request for a channel having content available in both HD and SD and determines that both HD streams are in use in other parts of the house, the client device may tune to the SD version. *Id.* at 8:32–39. Then, the client device may tune automatically to the HD stream when it becomes available. *Id.* at 8:41–43.

D. Illustrative Claim

Petitioner challenges claims 1–20 of the '363 patent. Claims 1 and 11 are independent, claims 2–10 depend directly or indirectly from claim 1, and claims 12–20 depend directly or indirectly from claim 11. Claim 1 is illustrative of the claimed subject matter:

1[a]. A method comprising:

[b] receiving a user selection of media content, wherein the media content is available in a first format from a first media source;

[c] accessing the media content in the first format from the first media source;

[d] determining that the media content is available in a second format from a second media source, wherein the second media source is different than the first media source;

[e] determining whether a client device is capable of generating for display the media content in the second format; and

[f] responsive to the second media source becoming available, automatically accessing the media content from the second media source instead of the first media source if the client device is capable of generating for display the media content in the second format.

Ex. 1001, 13:2–20 (lettering added in accordance with the scheme used by Petitioner).

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability against the challenged claims of the '363 patent:

Reference(s)	Basis	Challenged Claim(s)
Radloff ¹	§ 103(a) ²	1, 2, 4–7, 10–12, 14–17, 20
Radloff and Wachter ³	§ 103(a)	1, 2, 4–7, 10–12, 14–17, 20
Radloff and Harrar ⁴	§ 103(a)	3, 13
Radloff, Wachter, and Harrar	§ 103(a)	3, 13
Radloff and Calderwood ⁵	§ 103(a)	8, 9, 18, 19
Radloff, Wachter, and Calderwood	§ 103(a)	8, 9, 18, 19

Petitioner supports its challenge with the Declaration of Mr. Anthony J. Wechselberger (Ex. 1010).

¹ U.S. Patent Application No. 2008/0141317 A1, published June 12, 2008 (Ex. 1011, “Radloff”).

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the '363 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA version of § 103.

³ J. De Wachter et al., *Optimizing Channel Switching for Digital Television Through Low Quality Streams*, PROCEEDINGS OF THE SIXTH IASTED INTERNATIONAL CONFERENCE, COMMUNICATION SYSTEMS AND NETWORKS, Aug. 2007, at 55–62 (Ex. 1012, “Wachter”).

⁴ U.S. Patent Application No. 2008/0301749 A1, published Dec. 4, 2008 (Ex. 1013, “Harrar”).

⁵ U.S. Patent Application No. 2007/0101370 A1, published May 3, 2007 (Ex. 1014, “Calderwood”).

III. DISCUSSION

A. Discretionary Denial

Patent Owner urges us to exercise our discretion under 35 U.S.C. § 314(a) to deny institution of *inter partes* review because Petitioner has filed “six parallel and redundant petitions” challenging claims 1–20 of the ’363 patent. Prelim. Resp. 6. In Patent Owner’s view, the factors enumerated in *General Plastic Industrial Co. v. Canon Kabushiki Kaisha*, Case IPR2016-01357, slip op. at 9–10 (PTAB Sept. 6, 2017) (Paper 19) (precedential as to § II.B.4.i), should be applied to the six concurrently filed petitions and those factors weigh against institution of all six petitions. Prelim. Resp. 4–9.

On April 9, 2019, we issued an order requiring Petitioner to provide a Notice identifying a ranking of the six petitions in the order it wishes the panel to consider the merits, if the Board uses its discretion to institute any of the petitions, and a succinct explanation of the differences among the petitions, why the differences are material, and why the Board should exercise its discretion to consider instituting based on more than one petition challenging the ’363 patent. Paper 11, 4. We also provided Patent Owner with an opportunity to respond. *Id.*

Pursuant to our order, Petitioner requests that we consider the Petition in the instant proceeding first. Paper 12, 2. Patent Owner does not take a position on the relative strengths of the six petitions beyond what is set forth in its preliminary responses. Paper 13, 5. For the reasons explained below, we conclude in the instant proceeding that the information presented establishes a reasonable likelihood that Petitioner would prevail in demonstrating claims 1–20 of the ’363 patent are unpatentable. For the

reasons set forth in another decision issued concurrently with this decision, we deny institution of *inter partes* review in IPR2019-00285, IPR2019-00286, IPR2019-00287, IPR2019-00288, and IPR2019-00289. Therefore, we find the circumstances do not warrant denying institution in this proceeding as well. Accordingly, we decline to exercise our discretion to deny institution under 35 U.S.C. § 314(a).

B. Relevant Principles of Law

A claim is unpatentable under § 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. *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 skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations).⁶ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). The level of ordinary skill in the art is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

⁶ Neither party presents arguments or evidence of secondary considerations, which therefore do not constitute part of our analysis.

C. Level of Ordinary Skill in the Art

Relying on the testimony of Mr. Wechselberger, Petitioner asserts that a person of ordinary skill in the art at the time of the alleged invention of the '363 patent

would have had at least a bachelor's degree in computer science, electrical engineering, computer engineering, or a similar discipline, and at least two to three years of experience or familiarity with digital television signals and associated distribution networks (e.g., cable, satellite and Internet delivery) and consumer appliances (e.g., set top boxes, digital TVs and monitors/displays).

Pet. 12–13 (citing Ex. 1010 ¶ 28). Patent Owner does not dispute Petitioner's proposed level of ordinary skill or propose an alternative. *See generally* Prelim. Resp. We adopt Petitioner's proposed level of ordinary skill in the art for purposes of determining whether to institute an *inter partes* review.

D. Claim Construction

The '363 patent has not expired, and the Petition was filed prior to November 13, 2018. Therefore, we interpret terms of the challenged claims according to their broadest reasonable interpretation in light of the specification of the '363 patent. *See* 37 C.F.R. § 42.100(b) (2017); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).⁷ Consistent with the

⁷ *See also* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,344 (Oct. 11, 2018) (“The Office will continue to apply the BRI standard for construing unexpired patent claims . . . in AIA proceedings where a petition was filed before the [November 13, 2018] effective date of the rule.”).

broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Petitioner proposes constructions for several claim terms. Pet. 8–12. Although Patent Owner “does not acquiesce to those constructions,” Patent Owner nevertheless does not propose constructions of its own. Prelim. Resp. 12. We determine that, for purposes of this institution decision, no claim terms require express construction. *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)) (holding that only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy).

E. Asserted Obviousness of Independent Claims 1 and 11

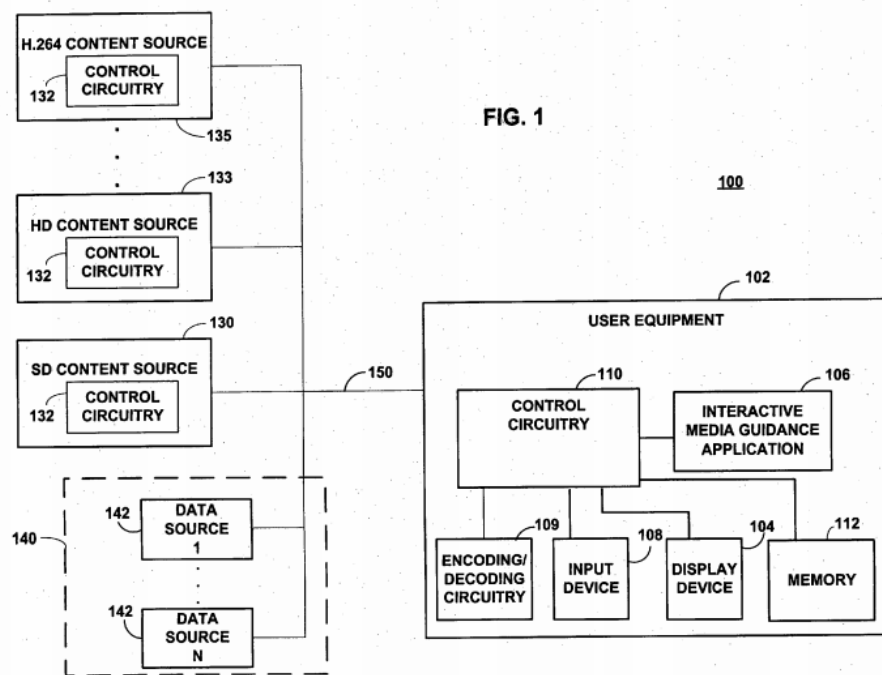
Petitioner contends that independent claims 1 and 11 are unpatentable under 35 U.S.C. § 103(a) as obvious over Radloff alone or, alternatively, over the combined teachings of Radloff and Wachter. Pet. 31–59. Citing the declaration of Mr. Wechselberger for support, Petitioner alleges that Radloff alone, as well as the combination of Radloff and Wachter, teaches or suggests the subject matter of claims 1 and 11 and provides reasons why a person of ordinary skill in the art would have combined the references. *Id.*; *see* Ex. 1010 ¶¶ 103–135, 145–165. In response, Patent Owner argues that Petitioner’s obviousness analysis relies on hindsight and that a skilled artisan

would not have combined Radloff and Wachter. Prelim. Resp. 19–32. For the reasons discussed below, we determine that, on the present record, the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claims 1 and 11 would have been obvious over Radloff alone and over Radloff in combination with Wachter.

1. Overview of Radloff

Radloff describes systems and methods for switching between media content sources providing alternative versions of a requested media asset. Ex. 1011, [57]. For example, a user may want to switch between an SD version and an HD version of a program. *Id.* ¶ 4. Radloff states that it is desirable to “provide user equipment that automatically presents the highest-quality version of a requested media asset that is available in the media system and supported by the user equipment device.” *Id.* ¶ 5. Radloff also indicates it is desirable to notify a user of the availability of alternate versions of media assets and to permit efficient switching from one version to another. *Id.*

Figure 1 of Radloff is reproduced below:



As shown in Figure 1 above, Radloff discloses a media system that includes user equipment 102 for receiving content from multiple sources, such as SD content source 130 and HD content source 133. *Id.* ¶ 25. These content sources may be, for example, cable system headends, satellite television distribution facilities, television broadcast facilities, or video-on-demand servers. *Id.* ¶ 26. User equipment 102 may be a set-top box, media server, personal computer, or mobile communications device such as a cellular telephone and includes interactive media guidance application 106. *Id.* ¶¶ 29, 33, 34. Different user equipment devices may have different capabilities and may be configured to display different types of content. *Id.* ¶¶ 33, 39. For example, some devices may be able to support and display HD content, whereas others may not. *Id.* The user equipment may have multiple buffers to buffer alternate versions of requested content in order to facilitate seamless switching between sources. *Id.* ¶ 45, Fig. 2.

In some embodiments described in Radloff, requested media content is presented automatically in the highest-quality version available. *Id.* ¶ 50. In other embodiments, content is not presented automatically in the highest-quality version available, but instead a version notification is presented to the user when the user tunes to a channel providing content that is available in alternate versions. *Id.* ¶¶ 50–51, Fig. 4. A version notification may be selectable by a user. *Id.* ¶ 53. In one example, after a user selects an alternate HD version of content being presented in SD, the SD version of a media asset may continue to be presented until a sufficient amount of the HD version received at the user equipment in a buffer has been decoded and is ready for presentation. *Id.* ¶ 53, Fig. 5.

Radloff discloses three illustrative processes implementing various aspects of its system. *Id.* ¶¶ 66–81. In illustrative process 900, after a user requests media content, the system determines the capabilities of the user equipment (step 906). *Id.* ¶ 68, Fig. 9. If the user equipment supports HD, and an HD version of the requested content is available, the system may automatically present the HD version (step 916), even if the user attempted to access the SD version. *Id.* ¶¶ 69–71, Fig. 9. A source mapping table may be updated to indicate that the HD version of the content is available, so that the HD version may be presented automatically if a user subsequently attempts to access the SD version. *Id.* ¶ 71.

Radloff also provides that “one or more steps shown in illustrative process 900 may be combined with other steps, performed in any suitable order, performed in parallel (e.g., simultaneously or substantially simultaneously) or removed.” *Id.* ¶ 72. For example, in some embodiments, instead of automatically presenting the HD version when a user

subsequently attempts to access the SD version, the system may present a version notification to the user, as provided in illustrative process 1000. *Id.*

Illustrative process 1000 is “for presenting a version notification or version toggle option to a user.” *Id.* ¶ 73. At step 1002, the system presents media content (e.g., the SD version of the content) to the user. *Id.* ¶ 73, Fig. 10. At step 1006, the system determines whether an alternate version of the content, such as an HD version, is available. *Id.* If an HD version is available, at step 1010 the system presents the user with a version notification or toggle option, which the user may select to switch to the HD version. *Id.* ¶ 74.

Illustrative process 1100 shows a procedure for buffering alternate versions of a media asset. *Id.* ¶ 77, Fig. 11. At step 1102, a user requests access to a media asset. *Id.* ¶ 78. The system then locates an alternate (e.g., HD) version of the requested content, either by searching a source mapping table or querying content sources (steps 1104, 1106, 1110). *Id.* ¶¶ 78–79. At step 1112, the alternate version of the content is buffered in a real-time buffer, such as the one shown in Figure 2 of Radloff. *Id.* ¶ 80. At step 1114, the system determines whether the buffer is ready and, if so, presents a toggle option or notification that the user may select to access the alternate (e.g., HD) version (step 1116). *Id.* As with the other illustrative processes, Radloff provides that one or more steps of process 1100 may be combined with other steps, performed in any order or in parallel, or removed. *Id.* ¶ 81.

2. Overview of Wachter

Wachter is an academic paper proposing a way to smoothen digital television channel transitions. Ex. 1012, 55 (Abstract). Specifically, Wachter proposes that “[w]hen the user selects a new channel, the low

quality version of the channel is displayed and the high quality version is requested. As soon as the high quality stream is available, high quality video is displayed.” *Id.* Thus, instead of watching a blank screen or frozen frame while awaiting content from the new channel, the user watches a lower resolution version of the channel for a brief moment. *Id.* Wachter discloses various techniques analyzed by the authors for reducing the time playback is disrupted when a user switches channels and a low-quality stream is displayed initially. *Id.* at 57–58 (§ 4.1). The techniques differ in how they determine which low-quality stream frames to decode and display. *Id.*

Wachter describes the architecture used to analyze the techniques discussed in the paper. *Id.* at 59–60 (§ 5). The system includes a video client having a buffer for buffering a high-quality stream and multiple buffers for buffering multiple low-quality streams. *Id.* at 59–60 (§ 5.3, Fig. 4). When the user selects a channel, the video client requests the appropriate high-quality stream, which subsequently is transmitted to the video client by a streaming server. *Id.* at 55 (§ 1), 56 (§ 3), 60 (§ 5.3). While the high-quality stream is being received and buffered, the video client decodes and displays an available low-quality stream. *Id.* at 56 (§ 3), 60 (§ 5.3). When the high-quality stream becomes available and is sufficiently buffered, the video client switches to the high-quality stream. *Id.* at 55 (§ 1), 56 (§ 3), 60 (§ 5.3).

3. Claim 1—Radloff

Petitioner first contends that Radloff teaches or suggests all of the limitations of independent claim 1. Pet. 32–34, 41–42, 45–53. Recognizing that Radloff does not expressly disclose a single embodiment with all of the

limitations arranged as claimed, Petitioner contends that Radloff's three illustrative processes, along with other aspects of Radloff's disclosed system, collectively teach the method recited in claim 1, with the process shown in Figure 11 teaching most of the limitations. *Id.* at 31–32. For example, illustrative process 1100 in Figure 11 begins with the step of receiving a user request for media content (step 1102), which Petitioner cites as the claimed “receiving a user selection of media content” (part of limitation 1[b]). *Id.* at 39 (citing Ex. 1011 ¶ 78; Ex. 1010 ¶ 114). Radloff also teaches that media content may be available in an SD format from an SD content source, which Petitioner asserts is “media content . . . available in a first format from a first media source,” as recited in the remainder of limitation 1[b]. *Id.* at 39–40 (citing Ex. 1011 ¶¶ 49–51, Figs. 3, 4; Ex. 1010 ¶ 114).

At step 1104 in Figure 11, Radloff determines whether the requested media content is available in an alternate version (e.g., an HD version) from an alternate source (e.g., an HD content source) by searching a source mapping table. Ex. 1011 ¶ 78. According to Petitioner, this step in Figure 11 teaches the claimed step of “determining that the media content is available in a second format from a second media source, wherein the second media source is different than the first media source” (limitation 1[d]). Pet. 45 (citing Ex. 1011 ¶¶ 48–50, 78; Ex. 1010 ¶¶ 122–124). Claim 1 also recites “determining whether a client device is capable of generating for display the media content in the second format” (limitation 1[e]). Although the illustrative process in Figure 11 does not expressly show determining whether user equipment is capable of displaying an HD version of the requested media content, Petitioner contends it would have been

obvious to modify the process in Figure 11 to include a step to determine user equipment capabilities, such as step 906 of Figure 9, before attempting to display HD content. *Id.* at 46–48 (citing, e.g., Ex. 1011 ¶¶ 67–69; Ex. 1010 ¶¶ 126–127).

Claim 1 further recites “accessing the media content in the first format from the first media source” (limitation 1[c]) and “accessing the media content from the second media source instead of the first media source if the client device is capable of generating for display the media content in the second format” (part of limitation 1[f]). Although not shown expressly in Figure 11, Petitioner contends that Radloff elsewhere teaches accessing an SD version of requested media content before an HD version becomes available. *Id.* at 40–41. For example, Petitioner points to Radloff’s Figures 4 and 10 as illustrating presentation of SD content prior to a user selecting an HD version of the content via a version notification or toggle option. *Id.* (citing Ex. 1011 ¶¶ 51, 53, 73; Ex. 1010 ¶ 115). According to Petitioner, with support from Mr. Wechselberger, it would have been obvious in view of Radloff’s various teachings to present SD content, as shown in Figures 4 and 10, while waiting for the buffer receiving HD content to be ready, as shown in Figure 11. *Id.* at 41–42 (citing Ex. 1010 ¶ 116). In particular, Petitioner asserts that Radloff expressly contemplates combining steps of its illustrative processes, and further contends a person of ordinary skill in the art would have been motivated to reduce delay between a user’s request and the display of content by presenting SD content while locating the corresponding HD content and waiting for it to become available. *Id.* (citing Ex. 1011 ¶¶ 53, 81; Ex. 1010 ¶ 116).

Limitation 1[f] also requires the step of accessing the media content from the second media source instead of the first media source to occur “automatically” and to be “responsive to the second media source becoming available.” For these recitations, Petitioner points to steps 1114 and 1116 shown in Radloff’s Figure 11, which present the user with an option to switch to the alternate version (e.g., HD version from an HD source) when the buffer containing the HD content is ready (i.e., when the HD content becomes available). *Id.* at 49 (citing Ex. 1011 ¶ 80; Ex. 1010 ¶ 129). Petitioner contends a person of ordinary skill in the art would have been motivated to modify step 1116 of Figure 11 to access the HD version automatically instead of giving the user an option to switch because, among other reasons, Radloff explicitly teaches it is beneficial to present alternate (e.g., HD) content automatically based on user preference, and automating the user’s manual selection option would have been a common practice that would increase efficiency. *Id.* at 50–51 (citing Ex. 1011, [57], ¶¶ 5, 45, 50, 53, 61, 71, 75, Fig. 9; Ex. 1010 ¶¶ 131, 133).

Patent Owner does not dispute that Radloff teaches or suggests the limitations of claim 1, but contends that Petitioner improperly cherry picks aspects of three separate embodiments of Radloff. Prelim. Resp. 3, 19–22. On the present record, however, we are not persuaded that Figures 9, 10, and 11 of Radloff disclose separate, mutually exclusive embodiments that cannot be combined. Rather, Radloff describes the three processes as “illustrative,” with each disclosing a different aspect of Radloff’s system for providing a user with alternate versions of a requested media asset. Ex. 1011 ¶¶ 66, 73, 78. In illustrative process 900 the system selects an alternate content source and presents an alternate version of a requested media asset; in illustrative

process 1000 the system presents a version notification or version toggle option allowing a user to select the alternate version of the media asset for viewing; and illustrative process 1100 shows how the system buffers the alternate version. *Id.* ¶¶ 66–71, 73–75, 78, 80. Radloff further provides that one or more steps of each illustrative process may be combined with other steps and specifically contemplates combining steps from processes 900 and 1000. *Id.* ¶¶ 72, 77, 81. Moreover, Radloff’s claim 11, which depends from claim 1, appears to recite a method comprising steps from all three illustrative processes, further suggesting Radloff intended the processes to be used together. *Id.* at claims 1, 11.

In addition, based on the record currently before us, we are persuaded that Petitioner has offered articulated reasoning with some rational underpinning as to why one of ordinary skill in the art would have combined or modified the teachings of Radloff in the manner proposed by Petitioner. *See* Pet. 41–42, 47–48. Patent Owner takes issue with Petitioner’s proposed rationale, arguing that the particular combination of features from Radloff set forth in the Petition is the result of hindsight. Prelim. Resp. 23–28. For instance, Patent Owner contends that Petitioner’s reasoning for modifying illustrative process 1100 in Figure 11 to present SD content while waiting for HD content to become available, as in Figures 4 and 10, is based on an alleged delay that does not exist. *Id.* at 23–26; *see* Pet. 41–42. Patent Owner also contends that Petitioner’s rationale for modifying illustrative process 1100 to check device capabilities before attempting to display HD content, as in step 906 of Figure 9, is based on a fabricated scarcity of memory and time. Prelim. Resp. 26–27; *see* Pet. 48. At this preliminary stage, however, Patent Owner’s position is based primarily on attorney

argument, whereas Petitioner supports its argument with the testimony of its declarant, Mr. Wechselberger. *See* Ex. 1010 ¶¶ 116, 127–128. During trial, Patent Owner will have an opportunity to develop its arguments further with supporting evidence.

For the foregoing reasons, based on the present record, Petitioner shows sufficiently for purposes of this decision that Radloff teaches or suggests the subject matter of claim 1 and provides sufficient reasoning with some rational underpinning as to why a person of ordinary skill in the art would have combined or modified Radloff’s teachings in the manner asserted. Accordingly, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claim 1 would have been obvious over Radloff.

4. Claim 1—Radloff and Wachter

As an alternative obviousness ground, Petitioner relies on the combination of Radloff and Wachter for teaching limitations 1[c] and 1[f]. Pet. 34–36, 42–44, 50–53. First, Petitioner asserts that Wachter expressly teaches accessing content from a low-quality (i.e., SD) stream when the user selects a new channel while buffering content from a high-quality (i.e., HD) stream, thus allegedly meeting the claim requirement of accessing media content in a first format from the first media source (limitation 1[c]) before accessing the media content in a second format from a second media source (limitation 1[f]). *Id.* at 42. Petitioner asserts that multiple rationales support combining this teaching of Wachter with Radloff’s process in Figure 11. *Id.* at 42–43. For example, Wachter explains that it is beneficial to the user to provide SD content while waiting for HD content to be received and

sufficiently buffered, resulting in a smoother channel transition. Ex. 1012, 55 (§ 1); *see* Pet. 43; Ex. 1010 ¶ 120.

Petitioner also cites Wachter's teaching of automatically switching from a low-quality (SD) stream to a high-quality (HD) stream when the HD stream becomes available from a buffer, as required by limitation 1[f]. Pet. 50; Ex. 1012, 55 (§ 1), 56 (§ 3). In view of this teaching, Petitioner contends it would have been obvious to modify step 1116 of Radloff's Figure 11 to access an alternate (e.g., HD) version automatically, responsive to the HD buffer becoming ready at step 1114. Pet. 50–51 (citing Ex. 1010 ¶ 132).

In addition to its arguments noted above challenging Petitioner's asserted rationale for modifying the process in Figure 11 of Radloff, Patent Owner contends that Wachter introduces additional problems that would have precluded a person of ordinary skill in the art from combining Wachter with Radloff. Prelim. Resp. 28–32. First, Patent Owner cites the following passage from the section of Wachter titled "Conclusion & Future Work": "The research focused on video streams, disregarding audio. Before deployment can be considered, audio needs to be added, and stream synchronization issues must be researched." Ex. 1012, 61 (§ 8). In view of that statement, Patent Owner argues that a skilled artisan would not have combined Wachter with Radloff because the resulting system would display a new channel without audio when the user changes the channel. Prelim. Resp. 29 (citing Ex. 1012, 61 (§ 8)).

On the present record, we are not persuaded by Patent Owner's argument, which improperly relies on bodily incorporating Wachter's system into Radloff's system. *See MCM Portfolio LLC v. Hewlett-Packard*

Co., 812 F.3d 1284, 1294 (Fed. Cir. 2015) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” (quoting *In re Keller*, 642 F.2d 413, 425 (CCPA 1981))). Moreover, we understand the cited passage of Wachter to refer to the authors’ evaluation of different techniques for speeding up the switch to a low-quality stream when a user changes channels. *See* Ex. 1012, 61 (§ 8). Wachter provides numerical results of that analysis—reducing the average time playback is disrupted while switching channels from 1400 ms to 78 ms—and then notes that a few issues need to be addressed before maximum benefit can be achieved using any of the presented techniques, including analysis of the techniques when audio is included. *Id.* But even if the particular setup used by Wachter to evaluate its proposed techniques did not include audio, Wachter nevertheless teaches displaying a low-quality stream while receiving and buffering a high-quality stream and automatically switching to the high-quality stream when it becomes available. *See id.* at 55 (§ 1), 56 (§ 3).

Second, Patent Owner argues that a person of ordinary skill in the art would not have combined Wachter with Radloff because Wachter’s methods appear to be incompatible with Radloff’s user equipment. Prelim. Resp. 31–32. In particular, Patent Owner contends that Petitioner fails to provide evidence that the specific processors used to test Wachter’s techniques would have existed on Radloff’s user equipment (set-top boxes, media servers, personal computers, or mobile communication devices) at the time of the ’363 patent. *Id.* (citing Ex. 1011 ¶ 29; Ex. 1012, 61 (§ 8)). This

argument is also unpersuasive, as Patent Owner again improperly relies on bodily incorporating Wachter's system into Radloff's. *See MCM*, 812 F.3d at 1294.

On the present record, and for purposes of this decision, Petitioner shows sufficiently that the combination of Radloff and Wachter teaches or suggests the subject matter of claim 1 and provides sufficient reasoning with some rational underpinning as to why a person of ordinary skill in the art would have combined the teachings of Radloff and Wachter in the manner asserted. Accordingly, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claim 1 would have been obvious over Radloff and Wachter.

5. Claim 11

Independent claim 11 is substantially the same as claim 1, reciting a “system comprising: a processor configured to” perform the same steps as the method of claim 1. Ex. 1001, 14:1–18. Petitioner contends that Radloff's interactive media system 100 and control circuitry 110, which may include one or more processors, meet the claimed “system” and “processor” limitations of claim 11. Pet. 54–55 (citing Ex. 1011 ¶¶ 25, 37, Fig. 1; Ex. 1010 ¶¶ 146–147). Petitioner also points to Radloff's disclosure that interactive media guidance application 106 performs the various processes described in Radloff, including those shown in Figures 9–11, and contends that Radloff's processors in control circuitry 110 would have executed guidance application 106. *Id.* at 55–56 (citing Ex. 1011 ¶¶ 66–81). Further, Petitioner asserts, it would have been obvious to modify the guidance application or replace it with a similar application to perform the functions recited in claim 11. *Id.* at 56 (citing Ex. 1010 ¶ 148). Petitioner then refers

back to its analysis of claim 1 to argue that Radloff alone and Radloff combined with Wachter teach or suggest the subject matter of claim 11.

Patent Owner does not respond specifically to Petitioner's contentions regarding claim 11 beyond its arguments regarding claim 1 addressed above. Having reviewed Petitioner's arguments and evidence with respect to claim 11, and for substantially the same reasons discussed with respect to claim 1, we determine that the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claim 11 would have been obvious over Radloff alone and over the combination of Radloff and Wachter.

*F. Asserted Obviousness of
Claims 2, 4–7, 10, 12, 14–17, and 20*

Petitioner contends that claims 2, 4–7, and 10, which depend directly or indirectly from claim 1, and claims 12, 14–17, and 20, which depend directly or indirectly from claim 11, are unpatentable under 35 U.S.C. § 103(a) as obvious over Radloff alone or, alternatively, over the combined teachings of Radloff and Wachter. Pet. 59–65. Petitioner relies on Radloff for teaching the additional limitations of these dependent claims. *Id.* For instance, claims 2 and 12 require the step of determining whether the client device is capable of displaying media content in the second format (e.g., HD), recited in claims 1 and 11, further to determine “hardware and/or software capabilities of the client device.” Ex. 1001, 13:21–24, 14:19–23. Claims 4 and 14 require the same step to include “locating a preconfigured identifier that indicates the capabilities of the client device.” *Id.* at 13:28–31, 14:27–30. For these claims, Petitioner cites step 906 in Figure 9, which determines the capabilities of, for example, a set-top box and may read the

model or version of the user equipment device. Pet. 59–61 (citing Ex. 1011 ¶ 68).

Claims 5 and 15 require the first and second media sources to comprise different channels from a head end. Ex. 1001, 13:32–34, 14:31–33. Claims 6 and 16 require the first format to be standard definition, and claims 7 and 17 require the second format to be high definition. *Id.* at 13:35–41, 14:34–40. For these limitations, Petitioner cites Radloff’s disclosure that “a standard-definition (SD) version and a high-definition (HD) version of the same media asset may be accessible from different content sources or on different channels at the same time,” and the content sources may be cable system headends and may be integrated into a single content source. Pet. 61–64 (citing Ex. 1011 ¶¶ 3, 26–27). Finally, for claims 10 and 20, which require the first and second media sources to be one of “a broadcast source, a cable source, a satellite source, and a video-on-demand source,” Petitioner cites Radloff’s disclosure that the content sources may include “cable system headends, satellite television distribution facilities, television broadcast facilities, [or] on-demand servers (e.g., video-on-demand (‘VOD’) servers).” Ex. 1001, 13:54–57, 14:53–56; Pet. 64–65 (citing Ex. 1011 ¶ 26).

Patent Owner does not respond specifically to Petitioner’s contentions regarding claims 2, 4–7, 10, 12, 14–17, and 20. Having reviewed Petitioner’s arguments and evidence, we determine that, on the present record, Petitioner sufficiently shows that Radloff alone and Radloff combined with Wachter teach or suggest the subject matter of these dependent claims and provides sufficient reasoning with some rational underpinning for combining the references. Accordingly, the information

presented shows a reasonable likelihood that Petitioner would prevail in establishing that claims 2, 4–7, 10, 12, 14–17, and 20 are unpatentable for obviousness over Radloff alone and over the combination of Radloff and Wachter.

G. Asserted Obviousness of Claims 3 and 13

Petitioner contends that claims 3 and 13, which depend from claims 2 and 12, respectively, are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Radloff and Harrar or, alternatively, over the combination of Radloff, Wachter, and Harrar. Pet. 65–68. Claims 3 and 13 require “querying a driver” when “determining the hardware and/or software capabilities of the client device.” Ex. 1001, 13:25–27, 14:24–26.

Harrar describes a system and method that provides higher-quality content (e.g., HD) automatically if it is available or supported when lower-quality content (e.g., SD) is selected by the user. Ex. 1013 ¶ 7. Harrar discloses determining the type of display device being used “without subscriber interaction, such as but not limited to assessments carried out over HDMI or DVI cables used to connect the [set-top box] to HD-enabled displays.” *Id.* ¶ 44. According to Petitioner and Mr. Wechselberger, a person of ordinary skill in the art would have known that carrying out an assessment of an HD-enabled display over HDMI would have involved querying a driver. Pet. 66; Ex. 1010 ¶ 178. Petitioner contends that in view of Harrar, it would have been obvious to query a driver of Radloff’s user equipment device to determine whether it was capable of displaying HD content. Pet. 67 (citing Ex. 1010 ¶ 179).

Patent Owner does not respond specifically to Petitioner’s contentions regarding claims 3 and 13. Having reviewed the arguments and evidence of

record, we determine that, for purposes of this decision, Petitioner shows sufficiently that the combination of Radloff and Harrar and the combination of Radloff, Wachter, and Harrar teach or suggest the subject matter of these dependent claims and provides sufficient reasoning with some rational underpinning for combining the references. Accordingly, the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claims 3 and 13 are unpatentable for obviousness over the combination of Radloff and Harrar and over the combination of Radloff, Wachter, and Harrar.

H. Asserted Obviousness of Claims 8, 9, 18, and 19

Petitioner contends that claims 8 and 9, which depend from claim 1, and claims 18 and 19, which depend from claim 11, are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Radloff and Calderwood or, alternatively, over the combination of Radloff, Wachter, and Calderwood. Pet. 68–77. Claims 8 and 18 require the step of “determining that the media content is available in the second format from the second media source” (e.g., HD) to comprise one of four determinations, including “determining whether the second media source is scheduled to provide the media asset.” Ex. 1001, 13:42–50, 14:41–49. Claims 9 and 19 require generating “for display a representation of content that is available via a plurality of different sources at the same time.” *Id.* at 13:51–53, 14:50–53.

Calderwood describes a set-top box that finds a corresponding HD program when a user selects an SD program. Ex. 1014, [57]. In contrast to some prior art electronic programming guides (EPGs), Calderwood discloses an on-screen programming guide that displays SD and HD channels having the same content next to each other. *Id.* ¶ 18, Figs. 2, 3.

Calderwood also describes searching the on-screen programming guide to determine whether an SD program is available in HD. *Id.* ¶ 27.

Petitioner contends that in view of Calderwood, it would have been obvious to modify Radloff or the combination of Radloff and Wachter to display an EPG showing content available from a plurality of different sources at the same time, thus allegedly meeting the limitations of claims 9 and 19. Pet. 74–77 (citing Ex. 1010 ¶¶ 196–197). Petitioner further contends it would have been obvious to modify Radloff or the combination of Radloff and Wachter to use EPG data to determine whether HD content is available, thus allegedly meeting the limitations of claims 8 and 18. *Id.* at 69–74 (citing Ex. 1010 ¶¶ 185–188).

Patent Owner does not respond specifically to Petitioner’s contentions regarding claims 8, 9, 18, and 19. Having reviewed the arguments and evidence of record, we determine that, for purposes of this decision, Petitioner shows sufficiently that the combination of Radloff and Calderwood and the combination of Radloff, Wachter, and Calderwood teach or suggest the subject matter of these dependent claims and provides sufficient reasoning with some rational underpinning for combining the references. Accordingly, the information presented shows a reasonable likelihood that Petitioner would prevail in establishing that claims 8, 9, 18, and 19 are unpatentable for obviousness over the combination of Radloff and Calderwood and over the combination of Radloff, Wachter, and Calderwood.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and Preliminary Response, we determine the information presented

shows a reasonable likelihood that Petitioner would prevail in showing that at least one of the challenged claims of the '363 patent is unpatentable.

Therefore, we institute an *inter partes* review of the challenged claims on the unpatentability grounds presented in the Petition.

V. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–20 of the '363 patent is instituted with respect to all grounds set forth in the Petition, commencing on the entry date of this decision; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby give of the institution of a trial.

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