

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

STINGRAY DIGITAL GROUP INC.,
Petitioner,

v.

MUSIC CHOICE,
Patent Owner.

Case IPR2017-01191
Patent 9,351,045 B1

Before MITCHELL G. WEATHERLY, GREGG I. ANDERSON, and
JOHN F. HORVATH, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* WEATHERLY.

Opinion Dissenting-in-Part filed by *Administrative Patent Judge*
HORVATH.

Opinion Concurring with additional views filed by *Administrative Patent*
Judge WEATHERLY

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

I. INTRODUCTION

A. BACKGROUND

Stingray Digital Group Inc. (“Petitioner”) filed a petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 9,351,045 B1 (Ex. 1001, “the ’045 patent”). 35 U.S.C. § 311. Music Choice (“Patent Owner”) timely filed a Preliminary Response. Paper 5 (“Prelim. Resp.”). On October 13, 2017, based on the record before us at the time, we instituted an *inter partes* review of claims 1–20. Paper 6 (“Institution Decision” or “Dec.”). We instituted the review to determine whether the challenged claims are unpatentable as obvious under 35 U.S.C. § 103 in view of the combination of U.S. Patent Application Publication No. 2002/0078456 A1 (Ex. 1004, “Hudson”) and U.S. Patent No. 6,248,946 B1 (Ex. 1006, “Dwek”). Dec. 24.

After we instituted this review, Patent Owner filed a Patent Owner Response in opposition to the Petition (Paper 20, “PO Resp.”) that was supported by a Declaration from Samuel Russ, Ph.D. (Ex. 2109). Patent Owner’s Response included a section VI(E) pertaining to secondary considerations of non-obviousness. *See* PO Resp. 32–52. However, Patent Owner filed an unopposed Motion to Expunge and Strike section VI(E) from its Response. Paper 26, 1. We granted Patent Owner’s Motion, and therefore do not consider any of Patent Owner’s secondary considerations of non-obviousness in reaching our conclusions regarding the patentability of the challenged claims. Paper 27, 2–3. Petitioner filed a Reply in support of the Petition (Paper 28, “Reply”) that was supported by a Reply Declaration of Michael Shamos, Ph.D (Ex. 1020). Patent Owner did not move to amend any claim of the ’045 patent.

We heard oral argument on June 19, 2018. A transcript of the argument has been entered in the record (Paper 37, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). The evidentiary standard is a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons expressed below, we conclude that Petitioner has demonstrated by a preponderance of evidence that claims 1–4 and 6–9 are unpatentable, but has failed to do so for claims 5 and 10–20.

B. RELATED PROCEEDINGS

The parties identified as a related proceeding the co-pending district court litigation of *Music Choice v. Stingray Digital Group, Inc.*, No. 2:16-cv-00586-JRG-RSP (E.D. Tex. June 6, 2016). Pet. 1; Paper 4, 2. Patent Owner identifies a number of other applications, patents, or proceedings as being related to this proceeding, including:

- a. *Stingray Digital Group Inc. v. Music Choice*, Case IPR2017-00888 (PTAB), involving related U.S. Patent No. 7,320,025;
- b. U.S. Patent Application Serial Number 11/002,181, issued as U.S. Patent No. 7,320,025 B1 on January 15, 2008;
- c. U.S. Patent Application Serial Number 11/963,164, issued as U.S. Patent No. 8,166,133 B1 on April 24, 2012;
- d. U.S. Patent Application Serial Number 13/453,826, filed on April 23, 2012 (Abandoned);
- e. U.S. Patent Application Serial Number 14/153,872, filed on January 13, 2014 (Abandoned); and

f. U.S. Patent Application Serial Number 15/162,259, filed on May 23, 2016 (Abandoned).

Paper 4, 2-3.

A. THE '045 PATENT

The '045 patent relates to “broadcast, on-demand and/or personalized entertainment and information systems.” Ex. 1001, 1:24-25. Figure 1, reproduced below, is a block diagram illustrating an embodiment of system 100.

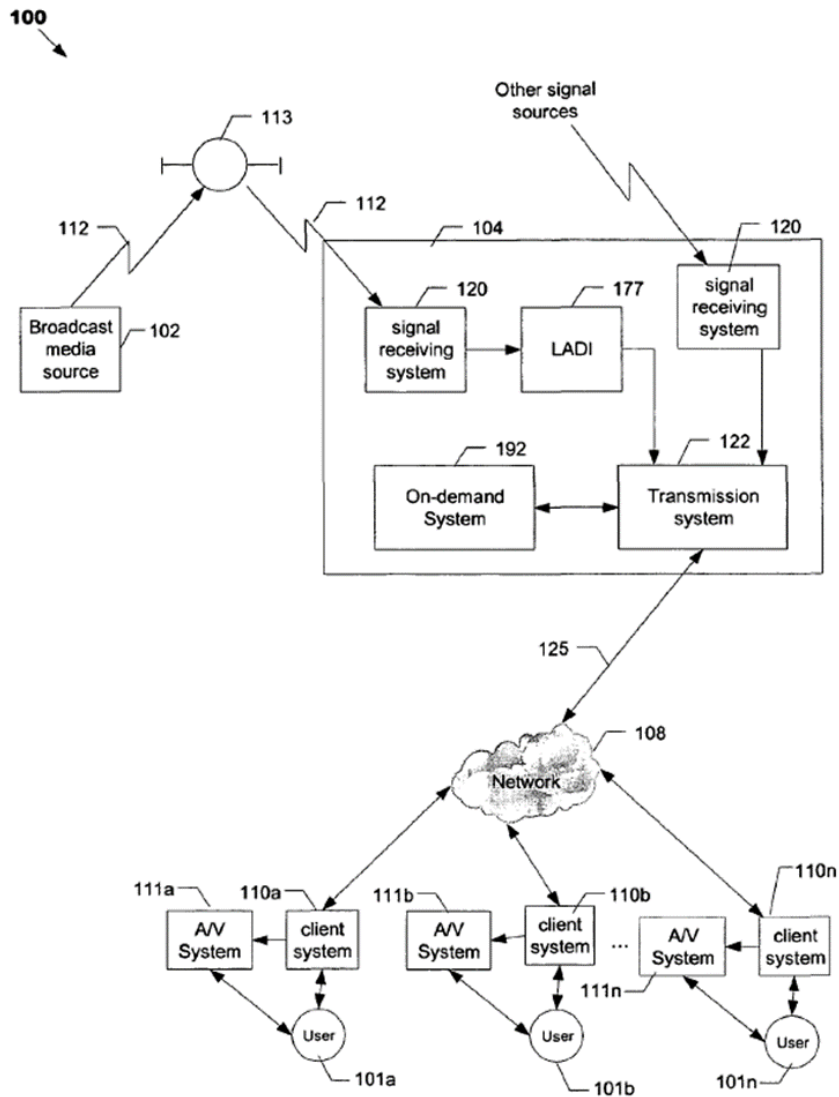


FIG. 1

Figure 1 illustrates that system 100 may include distribution center 104 with “one or more broadcast signal receiving systems 120 for receiving signals transmitted from broadcast media source 102,” as well as a “transmission system 122 for combining an output of signal receiving systems 120 and on-demand channels outputted by on-demand system 192 to generate a combined signal 125” for transmission to a plurality of client systems 110. *Id.* at 4:37–46.

“[M]edia source 102 transmits to the distribution centers 104 audio data corresponding to a song, video data to complement the audio data, and client application data,” and each “distribution center 104 may retransmit some or all of this data to a plurality of client systems 110.” *Id.*

at 5:43–50. “[T]he client application data may control at least part of the user interface displayed to the user 101,” as shown in Figure 3, which is reproduced at right. *Id.* at 5:57–58. “[V]ideo content” may

correspond to one or more “still images 302, 304 and text 306, 308 . . . all of which may be related to the current audio content of the broadcast channel.” *Id.* at 5:63–

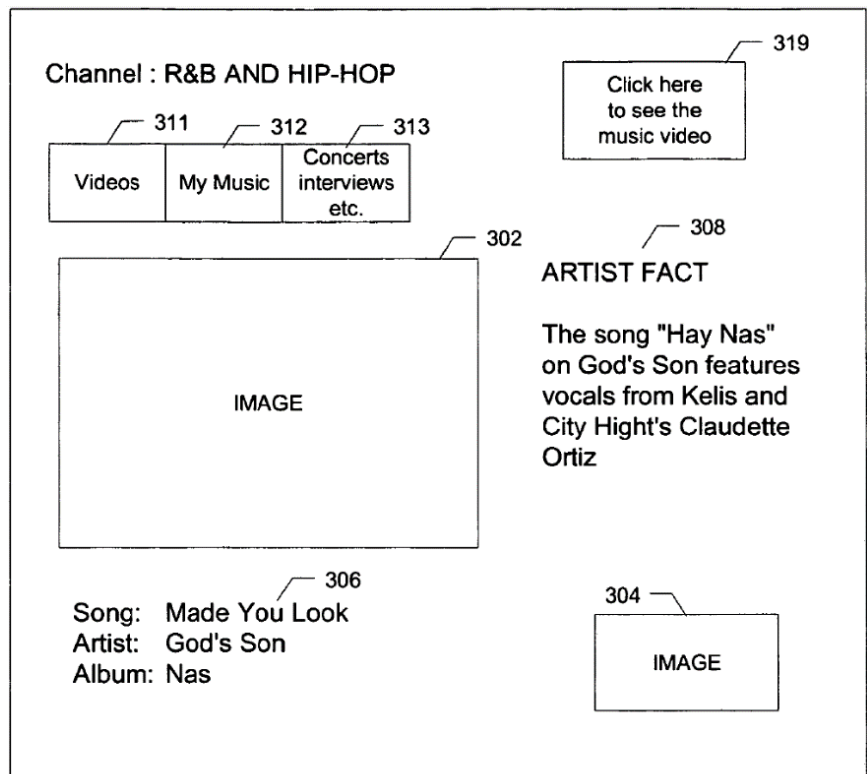


FIG. 3

66. The “application data” may control the user interface to display one or more buttons, such as buttons 311, 312, 313, and 319, to enable a user to directly “link” from the broadcast content to on-demand content. *Id.* at 6:5–40, 8:26–46. To initiate the on-demand session, the “client system 110 may transmit to on-demand system 192 information identifying the button activated.” *Id.* at 6:38–46. Additionally, “activating a particular button may cause client system 110 to transmit to on-demand system 192 an asset identifier associated with an asset,” and “[i]n response to receiving the asset identifier, on-demand system 192 may cease the current asset and transmit the asset identified by the identifier.” *Id.* at 8:55–60.

Claims 1, 6, 11, and 16 are the independent claims among the challenged claims. Claims 1 and 11 are directed to a “video-on-demand method.” *Id.* at 16:28 (claim 1), 18:19 (claim 11). Claims 6 and 16 are directed to a “video-on-demand system” that is recited to include “a computer system . . . configured to perform a method.” *Id.* at 17:24–25 (claim 6), 18:64–65 (claim 16). Claims 1 and 11 are illustrative of the claimed subject matter and recite:

1. A video-on-demand method, comprising:

- [a] creating a playlist, wherein the playlist comprises a set of media asset identifiers selected by a user of a client system, each media asset identifier included in the set of media asset identifiers identifying a media asset;
- [b] receiving information transmitted by the client system, the information indicating that a user of the client system desires to view a media asset identified by a media asset identifier included in the playlist;
- [c] in response to receiving the information, transmitting to the client system the media asset desired by the user;

- [d] transmitting to the client system a video identifier while transmitting to the client system the desired media asset, the video identifier identifying a video;
- [e] while the client system is playing the desired media asset enabling the user of the client system to indicate that the user desires to view the video identified by the video identifier, and then receiving from the client system a message comprising information indicating that the user desires to view the video identified by the video identifier, wherein the message is received while at least a portion of the media asset is being transmitted to the client system; and
- [f] in response to receiving the message from the client system, ceasing transmitting to the client system the media asset and transmitting to the client system video data corresponding to the video identified by the video identifier.

Id. at 16:28–55 (with the parties’ labeling indicated within square brackets).

11. A video-on-demand method, comprising:

- [a] selecting a song for one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music;
- [b] transmitting simultaneously to a plurality of client systems audio data corresponding to the selected song, wherein each of the plurality of client systems is configured to use the audio data to play the song so that each user of each of the plurality of client systems can listen to the song, and the plurality of client systems includes a first client system and a second client system;
- [c] while transmitting the audio data to the plurality of client systems, transmitting to the first client system a video identifier identifying a video;
- [d] while the first client system is playing the song enabling the user of the first client system to indicate that the user desires to view the video identified by the video identifier, and then receiving from the first client system a message comprising information indicating that the user desires to view the video

identified by the video identifier, wherein the message is received while at least a portion of the audio data is being transmitted to the first client system; and

[e] in response to receiving the message from the first client system, transmitting to the first client system video data corresponding to the video identified by the video identifier.

Id. at 18:19–45 (with the parties’ labeling indicated within square brackets).

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL

Petitioner contends a person of ordinary skill in the art pertaining to the ’045 patent, at the time of invention, “would have had at least an undergraduate degree in computer science or electrical engineering, or equivalent experience and, in addition, two years of experience in distribution of digital audio and video via networks.” Pet. 5 (citing Ex. 1003 ¶¶ 11–17). Patent Owner agrees. PO Resp. 6. In considering the issues presently before us, we have adopted and applied Petitioner’s proposed identification of the level of ordinary skill in the art, which is consistent with the ’045 patent and the asserted prior art.

B. CLAIM INTERPRETATION

“A claim in an unexpired patent that will not expire before a final written decision is issued shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016) (affirming that USPTO has statutory authority to construe claims according to Rule 42.100(b)). When applying that standard, we interpret the claim language as it would be understood by one of ordinary skill in the art in light of the specification, and absent any special definition,

we give claim terms their ordinary and customary meaning. *See In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.” (internal quotation marks omitted)). Only terms which are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

In the Decision on Institution, we instructed the parties to brief the meaning of “a message comprising information indicating that the user desires to view the video identified by the video identifier” as recited in claims 1 and 6; and “in response to receiving the message” as recited in claims 1 and 6. Dec. 24. The parties agreed upon the express meaning of both phrases, PO Resp. 6–7; Reply 2, which we adopt for the purposes of this Final Written Decision. We discern no need to interpret any other phrase expressly for the purposes of this Final Written Decision.

C. LEGAL STANDARDS

Petitioner challenges the patentability of claims 1–20 on the grounds that the claims are obvious in view of Hudson and Dwek. To prevail, Petitioner must establish facts supporting its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). “In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to

each claim”). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review).

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), reaffirmed the framework for determining obviousness set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The *KSR* Court summarized the four factual inquiries set forth in *Graham* that we apply in determining whether a claim is reasonably likely to be unpatentable as obvious under 35 U.S.C. § 103(a) as follows: (1) determining the scope and content of the prior art, (2) ascertaining the differences between the prior art and the claims at issue, (3) resolving the level of ordinary skill in the pertinent art, and (4) considering objective evidence indicating obviousness or nonobviousness. *KSR*, 550 U.S. at 406 (citing *Graham*, 383 U.S. at 17–18). In an *inter partes* review, Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Thus, to prevail, Petitioner must explain how the proposed combinations of prior art would have rendered the challenged claims unpatentable. With these standards in mind, we address each challenge below.

D. THE PRIOR ART

1. Hudson

Hudson relates to “a system and methods for creating and distributing interactive video content.” Ex. 1004 ¶ 6. Hudson describes providing “primary content” and “ancillary content” with the ancillary content being

accessed by interacting with an interface link that is displayed while a user is viewing the primary content.

For example, if the user is watching a basketball game, and the user is interested in a particular shoe worn by a basketball player, the user may select the interface link associated with the basketball player's shoe. Interacting with the interface link associated with the basketball shoe allows the user to access one or more pages of information or media content related to the shoe of interest, including retail information. During the user's interaction with the interface link, the video stream is paused until the user returns to or continues the video stream delivery.

Id. ¶ 9. The ancillary content may be, for example, another video. *Id.* ¶ 25.

The interface links used to access ancillary content while viewing primary content may be embedded in and streamed with the primary video content.

Id. ¶ 30.

Petitioner describes one manner in which Hudson presents primary video content and the embedded link for accessing ancillary content in the colored version of a portion of Hudson's

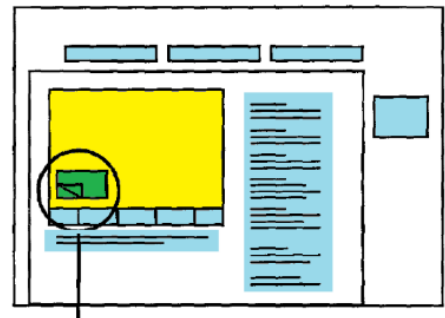


Figure 5, reproduced in pertinent part at right. Hudson presents primary video content in the yellow rectangle along with an interface link (green) that is displayed as a "floating bug" on top of the primary video content. Pet. 26–27 (citing Ex. 1004 ¶¶ 11, 24, 25, 27, Figure 5). When the user clicks on the interface link (green), the primary video content is paused and ancillary content is displayed to the user.

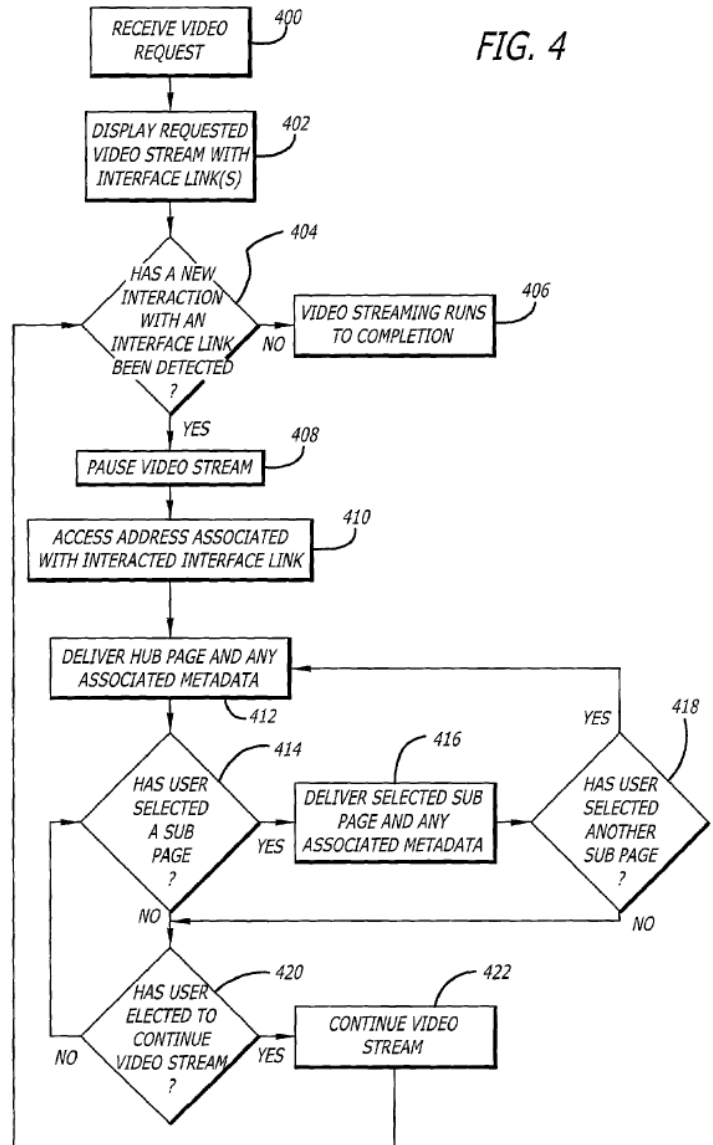
Ex. 1004 ¶¶ 25, 37, Figure 4.

Hudson explains the manner in which a user watching primary video content can interact with an interface link in connection with the logic flow diagram of Figure 4, which is reproduced below right, as follows:

If the user decides to interact with an interface link in step 404, then the user selects a desired interface link corresponding to an object of interest. . . . Once an interaction with the interface link has been detected, in step 408 the video stream is paused or interrupted.

[0038] In step 410, the IP address associated with the interacted interface link is accessed. . . . In step 412, a hub page and any associated metadata with the accessed address are delivered to the user.

[0039] . . . If the user decides not to select any further pages, then in step 420 the user may decide whether to continue the video stream in step 422.



Id. ¶¶ 37–39.

Hudson organizes its video content into “storyboards,” which are implemented using “hub pages” that include links to the video content. *Id.* ¶¶ 24, 26. Each “hub page” may also include links to “sub-pages” that a user may select to access content related to the primary content shown on the hub page. *Id.* ¶¶ 26, 38, 42. Once the storyboard is created and the hub and sub-pages reflecting the storyboard are generated, a user may navigate the storyboard in any order he desires. *Id.* ¶ 39.

2. *Headings*¹

Petitioner also relies on “the content” of a U.S. application that Hudson broadly incorporates as follows: “[a] preferred example of a content management system operable with the present invention is taught in U.S. application Ser. No. (to be assigned), titled ‘Content Management System,’ filed Jul. 31, 2001, which claims priority to U.S. application No. 60/280,691 the disclosures of which are hereby incorporated by reference herein.”² Ex. 1004 ¶ 27.

Headings describes a “preferred example of a content management system operable with [Hudson].” *Id.* Headings’ system relates to “methods for managing the preparation, programming, and publication of media assets.” Ex. 1005 ¶ 6. Those “media assets” include “movies, music videos, educational content, television shows, games, live events, and advertising.”

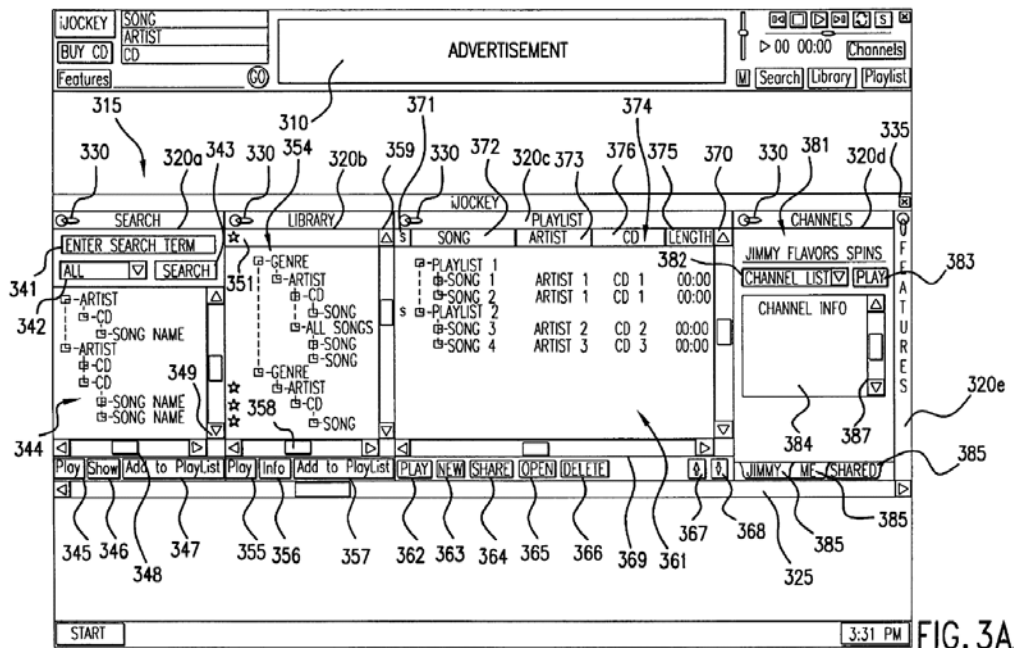
¹ Petitioner refers to Exhibit 1005, U.S. Pat. App. Pub. 2002/0143782 A1 (published October 3, 2002) as “Headings,” which it asserts to be the published version of the application incorporated by referenced in Hudson. Pet. 6–7; see also Ex. 1005, Cover page (referring to priority claim to U.S. application No. 60/280,691).

² The issue of whether a patent document incorporates material by reference sufficiently for the incorporated material to become part of the disclosure of the citing document is an issue of law. *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1283 (Fed. Cir. 2000). The Federal Circuit has found that language such as that appearing Hudson incorporates the entire contents of the referenced document. *See Harari v. Lee*, 656 F3d. 1331, 1335–36 (Fed. Cir. 2011) (finding an application’s disclosure was incorporated by reference in its entirety “by the broad and unequivocal language: “The disclosures of the two applications are hereby incorporate[d] by reference.”). Accordingly, we conclude that Hudson incorporates the entire disclosure of Headings by reference, and Petitioner’s reliance on that disclosure is proper.

Id. ¶ 27. Headings further describes organizing content into categories (“movies, adult movies, television programs, books, music, music specials, and radio”) and sub-categories (e.g., “If the item type were, for example, music, then preferred media asset categories may include a preview video, tracks, an album cover, a browser thumbnail, and branding art”). *Id.* ¶ 32. Headings explains that the content it manages may be delivered over a number of different “digital service platforms” including “cable set-top box, digital subscriber line (DSL), and satellite platforms.” *Id.* ¶ 5.

3. Dwek

Dwek discloses a user interface that allows end users to search an online media database and then add songs in a desired order to a playlist. Ex. 1006, Abstract. Dwek’s user operates “a user interface which allows a user to search an online database of media selections and build a custom playlist,” *id.* at 3:45–48, an example of which is illustrated in Dwek’s Figure 3A that we reproduce below.



Dwek’s Figure 3A illustrates an embodiment of user interface 250 for music player 120.

Dwek's user interface 250 includes playlist pane 320c featuring buttons for interacting with playlists including buttons labeled, PLAY 362, NEW 363, SHARE 364, OPEN 365, and DELETE 366. *Id.* at 8:26–31; Figure 3A.

Dwek explains that it was known that: “listeners desire the freedom and flexibility to choose exactly what song they hear, in the order they choose, and at times of their own choosing.” *Id.* at 1:37–40. Dwek also explains that traditional AM/FM radio stations and some existing Internet radio stations did not “meet the desire for total flexibility of music choice by a listener” because “the songs which are played are chosen by a program director.” *Id.* at 2:5–8. To address this shortcoming, Dwek describes a media player for playing music delivered via the Internet having “a user interface which allows a user to search an online database of media selections and build a custom playlist.” *Id.* at 3:40–48.

Dwek also recognized the desire for improving advertising and commercial opportunities: “[I]t would be advantageous to provide a system and method of multimedia content delivery over a computer network which provides increased value to advertisers.” *Id.* at 3:28–31. To accomplish this goal, Dwek describes delivering advertising to end users in portion of toolbar 310 labeled “ADVERTISEMENT,” which persists on a user's display while a song is playing. *Id.* at 3:50–57; 14:36–56, Figures 3A, 5.

E. INDEPENDENT CLAIMS 1 AND 6

1. *Petitioner's Argument and Evidence*

Petitioner identifies in detail the portions of Hudson and Dwek that describe each limitation of claim 1. Pet. 17–31 (citing Ex. 1004 ¶¶ 9–11, 21, 24, 25, 27, 28, 37, 38, 41, 44, 59, Figures 3–5). Petitioner also supports its contentions with expert testimony from Michael Shamos, Ph.D. *Id.* (citing

Ex. 1003 ¶¶ 48–50, 53–57). Petitioner relies upon Hudson as describing all aspects of the claimed video-on-demand method other than creating a playlist. Pet. 17–31. Petitioner relies upon Dwek as describing methods enabling a user to create a customized playlist of media assets. *Id.* at 17–31. Petitioner contends that both Hudson and Dwek relate to systems permitting a user to view or listen to media content while being provided with an option to view ancillary content, for example, advertising. *Id.* at 14–15 (citing Ex. 1004 ¶ 24; Ex. 1006 1:31–50, 3:28–57). Hudson’s system delivers viewable “content” including “advertisements, promotions, music videos, motion pictures, and television programs.” Ex. 1004 ¶ 7. Hudson enables users to “effortlessly make a real-time transaction” while viewing a program and “may also be used for advertisements and specialized e-commerce opportunities.” *Id.* ¶ 12.

Based on the overlapping disclosures and goals of Hudson and Dwek, Petitioner argues that an ordinarily skilled artisan would have found it “obvious to combine the playlist creation and selection features of Dwek with the on-demand playback system of Hudson” to gain the advantages that would “enhance the user’s experience with control over media playback choices and would also enhance the advertiser’s ability to reach end users in an unobtrusive and effective way.” *Id.* at 16 (citing Ex. 1003 ¶¶ 40–46).

2. *Analysis of Patent Owner’s Arguments and Evidence*

Patent Owner argues that Petitioner’s challenge to independent claims 1 and 6 fail for two reasons. First, Patent Owner contends that an ordinarily skilled artisan would have neither wanted to combine the teachings of Hudson and Dwek nor would have been able to do so without undue experimentation. PO Resp. 15–22. Second, Patent Owner contends

that neither Hudson nor Dwek describe “in response to receiving the message” indicating that a user wishes to view a desired video, “ceasing transmitting” the media asset that was playing at the time and transmitting the desired video. *Id.* at 27–31. For the reasons expressed below, neither argument is persuasive.

a) Motivation to Combine

(1) *Teaching Away*

Patent Owner first argues that, because Hudson teaches away from incorporating Dwek’s customizable playlists, an ordinarily skilled artisan would not want to modify Hudson as Petitioner proposes. *Id.* at 15–18. Patent Owner contends that a “fundamental aspect of Hudson,” is solving “a need for interactive video content programming that permits the user to stop the video play to view ancillary content, and then continue video play from the point in time where play was stopped.” PO Resp. 16–17 (quoting Ex. 1004 ¶ 5); *see also* Ex. 1004 ¶¶ 9, 39, 48; Figure 4 (illustrating step 408 of pausing video stream when user selects link to ancillary content). Patent Owner contends that, by contrast, Dwek’s music channels and customized playlists are “incompatible” with Hudson because Dwek continuously streams its content to player 120 such that when a user selects the content, the user joins the playlist “in progress.” PO Resp. 17 (citing Ex. 1006, 9:62–64, 10:28–34). Patent Owner concludes that Dwek fails to address the problem that Hudson solves, “namely, how to allow a content manager to provide interactivity without having to miss a single frame of the original show.” *Id.* at 18.

The Federal Circuit recently set forth the law relating to whether a reference “teaches away” from a proposed modification as follows:

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (quoting *Ricoh Co., Ltd. v. Quanta Comput. Inc.*, 550 F.3d 1325, 1332 (Fed. Cir. 2008)). Moreover, a reference “must [be] considered for all it taught, disclosures that diverged and taught away from the invention at hand as well as disclosures that pointed towards and taught the invention at hand.” *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 296 (Fed. Cir. 1985) (citation omitted). A reference does not teach away “if it merely expresses a general preference for an alternative invention but does not ‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.” *DePuy*, 567 F.3d at 1327 (quoting *In re Fulton*, 391 F.3d at 1201). But even if a reference is not found to teach away, its statements regarding preferences are relevant to a finding regarding whether a skilled artisan would be motivated to combine that reference with another reference. See *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1051 n.15 (Fed. Cir. 2016) (en banc) (noting that, even if a reference “does not teach away, its statements regarding users preferring other forms of switches are relevant to a finding regarding whether a skilled artisan would be motivated to combine the slider toggle in” that reference with the invention of a second reference).

Polaris Indus., Inc. v. Arctic Cat, Inc., 882 F.3d 1056, 1069 (Fed. Cir. 2018).

Against this background, we determine that Hudson does not teach away from incorporating the ability to customize playlists as described by Dwek.

Hudson never expressly mentions permitting a user to customize its storyboards much less disparages doing so. Dr. Shamos testifies that an ordinarily skilled artisan would have recognized that Hudson’s advantages of providing links to ancillary content along with primary content would be further enhanced if users also had Dwek’s ability to customize the primary content they were viewing. Ex. 1003 ¶¶ 43–46. Dr. Russ’s conclusions

otherwise fail to consider each of Hudson and Dwek as a whole, but instead focus narrowly upon specific implementations of delivering media in each reference. Ex. 2109 ¶¶ 49–52.

When Hudson and Dwek are considered as a whole, the similarities in their goals suggests their combination. For example, Hudson, by incorporating Headings by reference,³ recognizes that its system is compatible with streaming a wide variety of content including “movies, music videos, educational content, television shows, games, live events, and advertising.” Ex. 1005 ¶ 27. Similarly, Dwek recognizes that its system may deliver more than music; it may also “deliver video or other streaming multimedia content.” Ex. 1006, 4:10:12. Patent Owner argues that because Dwek describes joining a customized, shared channel “in progress,” Dwek’s system only broadcasts streams in a manner akin to live radio. PO Resp. 17. However, Dwek also contemplates starting playback of its user-defined shared channels at the beginning of the user-defined playlist. *Id.* at 11:27–33. Based on our review of Hudson and Dwek, we determine that they both describe systems in which users have some degree of control over what content they consume and when they consume it. Ex. 1004 ¶¶ 37–40, Figure 4; Ex. 1006, 1:31–50. We also determine that both systems are designed to facilitate commerce related to the content. Ex. 1004 ¶ 41, 44; Ex. 1006, 3:28–57. Based upon our consideration of Hudson and Dwek as a whole, we credit the testimony of Dr. Shamos over that of Dr. Russ and conclude that Hudson does not teach away from permitting a user to

³ Ex. 1004 ¶ 27.

customize its content storyboards in a manner akin to Dwek's customization of musical playlists.

(2) *Undue Experimentation*

Patent Owner also argues that modifying Hudson to add Dwek's ability to customize a playlist of content would have required "undue effort and experimentation." PO Resp. 19–22. Patent Owner relies almost exclusively upon testimony from Dr. Russ, who cites almost no objective evidence to support his conclusions. *Id.* (citing Ex. 2109 ¶¶ 53–58 (citing only Ex. 1004 ¶ 4 (addressing limitations of using vertical blanking interval to transmit data in live broadcasts))). The parties agree that an ordinarily skilled artisan would have an engineering or computer science degree and two years of industry experience with systems that distribute digital media. *See* Part II.A above. We are persuaded by Petitioner's evidence that a person with that level of skill would not have viewed the proposed modification to Hudson as being unduly difficult or requiring undue experimentation.

Dr. Russ testifies that the proposed combination of Hudson and Dwek is not "end-user friendly," Ex. 2019 ¶ 55, and would not be "useable to an end-user," *id.* ¶ 56. Dr. Russ cites and analyzes virtually no objective evidence in support of his conclusion that modifying Hudson as suggested by Petitioner would have required undue effort or experimentation. *Id.* ¶¶ 53–58 (containing one citation to Ex. 1004 ¶ 4). Dr. Russ testifies that creating Hudson's storyboards "takes a lot of work," and that those "storyboards are not intended to be customizable by the end-user." Ex. 2109 ¶ 55 (citing Ex. 2109 ¶ 40 (citing Ex. 1004 ¶¶ 25–27, 29–34, 43 (describing tools for building Hudson's storyboards))).

However, Petitioner does not propose modifying Hudson to permit an end user to revise the storyboards themselves. Rather, Petitioner proposes that an ordinarily skilled artisan could easily have modified Hudson to permit an end user to select and arrange existing storyboards into a customized playlist akin to Dwek's customized music playlist. Pet. 18–21; Reply 10.

Dr. Shamos testifies that an ordinarily skilled artisan would have had no difficulty modifying Hudson to permit users to select and arrange Hudson's pre-existing storyboards into customized playlists akin to the customized music playlists of Dwek. Ex. 1021 ¶ 17. Dr. Shamos correctly points out that the media players described by both Hudson and Dwek operate in a Microsoft Windows environment and permit access to secondary content via HTML-based hyperlinking techniques. *Id.* (citing Ex. 1004 ¶¶ 9, 11, 21, 22, 24, 26, 29–33, 36–44, 46, 47, 50, 52, 53, 55, 56, 59, Figure 4; Ex. 1006, 4:10–15, 4:26–29, 4:60–63, 5:5–24, 6:55–62, 8:2–10, 9:63–66, 10:28–32, 10:42–47, 11:23–27, 11:35–39, 14:8–13, 15:40–49). Dr. Shamos concludes that modifying Hudson to allow a user to create a customized playlist of Hudson's storyboards for primary content would have merely involved using industry-standard software. *Id.*

We credit the testimony of Dr. Shamos over that of Dr. Russ based on Dr. Shamos' more detailed review of the specific disclosures in Hudson and Dwek about the software environments in which each system was implemented and the import of those disclosures to an ordinarily skilled artisan. Accordingly, we determine that adding Dwek's customizable playlists to Hudson would not have required undue effort or experimentation by an ordinarily skilled artisan.

(3) *Conclusion*

Based on the record developed at trial, we determine that Petitioner has demonstrated by a preponderance of evidence that an ordinarily skilled artisan would have been motivated to modify Hudson to permit a user to create a playlist of Hudson's media assets as described in Dwek.

b) Elements 1f and 6g

The parties refer to the following limitation as step 1f: "in response to receiving the message from the client system, ceasing transmitting to the client system the media asset and transmitting to the client system video data corresponding to the video identified by the video identifier." Pet. 30; PO Resp. 27–32. The parties identify the following similar limitation in claim 6 to which they refer as step 6g:

in response to receiving from the client system a message comprising information indicating that the user desires to view the video identified by the video identifier, ceasing transmitting to the client system the media asset and transmitting to the client system video data corresponding to the video identified by the video identifier.

Pet. 44–45 (quoting Ex. 1001, 17:47–53); *see also* PO Resp. 27–32 (arguing that Hudson and Dwek fail to describe limitation 6g for same reasons identified for limitation 1f).

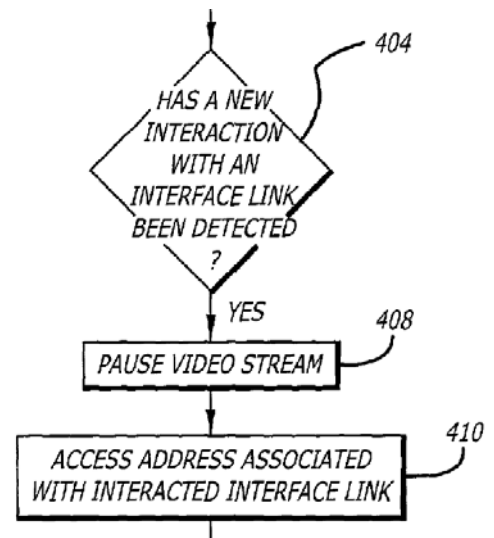
Petitioner contends that when the primary “video stream is paused or interrupted” in Hudson’s step 408, Hudson is responding to the user’s interaction with Hudson’s “interface link.” Pet. 30 (citing Ex. 1004 ¶¶ 9, 10, 25, 37, Figures 4, 5). Patent Owner argues that Petitioner has not established that Hudson and Dwek describe ceasing transmission of a media asset “in response to receiving” a message with information indicating that a user wishes to view a video. PO Resp. 27–31. Patent Owner contends that “in Hudson, the transmission ceases *before* the video identifier HTTP message is sent, and therefore this claim limitation cannot be met.” *Id.* at 28 (citing

Ex. 1004 ¶ 38, Figure 4). Patent Owner rests its argument on the order in which steps 408 and 410 appear in Hudson’s Figure 4, which we reproduce in pertinent part at right. *Id.* at 28–30.

Patent Owner places particular significance on the text appearing in block 408, reading “PAUSE VIDEO STREAM” as demonstrating that interacting with an interface link at step 404 immediately causes the video stream to stop,

before the client sends an HTTP message to access the desired video in step 410. *Id.* at 30. Patent Owner also argues that the prosecution history of Hudson supports its position. *Id.* at 28 (citing, without explanation or analysis, Ex. 2107, 17). Patent Owner proffers no expert testimony to support its view of the manner in which Hudson operates. *Id.* at 28–31.

Petitioner relies upon Hudson’s description of pausing or interrupting a video stream after a user interacts with an interface link as “ceasing transmitting to the client system the media asset.” Pet. 30–31. Petitioner



also contends that a user clicking on Hudson's interactive link causes Hudson's system to respond by delivering ancillary content. *Id.* (citing Ex. 1004 ¶ 10 and steps 404, 408 as shown in Figure 4). Dr. Shamos testifies that, when a user interacts with an interface link, Hudson's client sends a message in an HTTP format that includes information identifying ancillary video content that the user wishes to access. Ex. 1003 ¶ 58 (citing Ex. 1004 ¶¶ 9, 10, 25, 37, Figures 4, 5). This HTTP message is received by Hudson's video server. Ex. 1003 ¶ 57. Dr. Shamos opines that an ordinarily skilled artisan would understand that "when a user clicks an interface link, both (a) transmission of the primary video is paused/interrupted (ceased) and (b) transmission of the ancillary video is initiated." *Id.* ¶ 23 (citing Ex. 1004 ¶¶ 9, 10, 25, 37, Figures 4, 5). His testimony is unrebutted by Dr. Russ.

We first note that Hudson's Figure 4 pertains to a "method for delivering interactive video." Ex. 1004 ¶ 29. Thus, steps 408–410 are steps conducted by Hudson's on-demand video delivery system rather than a client system. As steps 408 and 410 indicate, when Hudson's on-demand video delivery system detects user interaction with a video link (step 404), it ceases transmission of the current video stream (step 408), accesses the video associated with the video link (step 410), and delivers that video (hub page) to the client system (step 412).

Hudson's on-demand video delivery system presents interface links to the user identifying ancillary content, Ex. 1004 ¶ 29, which may be embedded with primary video, *id.* ¶ 30, or delivered to users separately by web server 108, 208, *id.* ¶ 33. Hudson states that "once an interaction with the interface link has been detected, in step 408 the video stream is paused or interrupted." *Id.* ¶ 37 (emphasis added). Hudson describes its system as

being “adapted to interrupt the delivery of video to a visual display and provide access to ancillary content accessible over a network.” *Id.* ¶ 10. Hudson’s servers 100 deliver video streams over network 102 to users 104. *Id.* ¶ 21. Network 102 is “any network that accommodates electronic delivery of content including, . . . satellite transmission, wireless networks, digital subscriber lines, cable, and other communication networks.” *Id.*

Hudson’s prosecution history further supports Petitioner’s argument, and our interpretation of Hudson’s disclosure. During prosecution, Hudson’s amended claim 1 recited:

interacting, during the streaming of the video, with the interface link to access the ancillary content;

interrupting, at the remote location, *the streaming* of the video at a point in time *in response to the interacting* with the interface link so as to *prevent streaming* of the video over the network;

transmitting, after interrupting at the remote location the streaming of the video, a request of the user for the ancillary content over the network to a remote site where the ancillary content is stored;

delivering the ancillary content over the network and displaying the ancillary content on the video display;

Ex. 2107, 2 (stricken text and underlining removed) (emphasis added). The claim expressly states that streaming of the original video is interrupted at the remote location (*i.e.*, at the on-demand video delivery system) “in response to” the step of interacting with an interface link. These steps are precisely what is required by limitations 1f and 6g.

Accordingly, Petitioner persuades us by a preponderance of evidence that Hudson’s server 100 ceases transmitting a video stream over network 102 and then transmits another video stream (*i.e.*, ancillary content requested

by a user) to user 104 over the network. Petitioner also persuades us that both ceasing the transmission of video and transmitting the next video are performed in response to server 100 receiving an HTTP message from a client system identifying the video desired by the user. Accordingly, we determine that Petitioner has demonstrated by a preponderance of evidence that Hudson describes elements 1f and 6g.

3. *Conclusion*

For the reasons expressed above, we conclude that Petitioner has demonstrated by a preponderance of evidence that the combination of Hudson and Dwek renders independent claims 1 and 6 unpatentable as obvious.

F. *DEPENDENT CLAIMS 2–4 AND 7–9*

Claims 2–4 ultimately depend from claim 1 and claims 7–9 ultimately depend from claim 6. Ex. 1001, 16:56–62 (claims 2–4), 17:54–60 (claims 7–9). Petitioner contends that Hudson alone or each of Hudson and Dwek describes the limitations introduced in claims 2–4 and 7–9. Pet. 31–33 (claims 2–4), 45–46 (claims 7–9). Patent Owner does not argue otherwise or identify any reason other than those offered in connection with the challenge to claims 1 and 6 that the combination of Hudson and Dwek fails to render claims 2–4 and 7–9 obvious. *See* PO Resp. 51–52 (Patent Owner’s argument for patentability of claims 2–4 and 7–9 resting solely upon its showing regarding claims 1 and 6). We adopt as our own Petitioner’s argument and evidence challenging the patentability of claims 2–4 and 7–9.

Based on our review of the Petition as it relates to claims 2–4 and 7–9, and our evaluation of Petitioner’s challenge to claims 1 and 6 as set forth above, we are persuaded that Petitioner has demonstrated by a

preponderance of evidence that the combination of Hudson and Dwek renders claims 2–4 and 7–9 unpatentable as obvious.

G. CLAIMS 5 AND 10–20

Petitioner argues that the combination of Hudson and Dwek renders claims 5 and 10–20 unpatentable as obvious. Pet. 33–40 (claim 5), 46–56 (claims 10–20). As explained in further detail below, we determine that Petitioner has failed to demonstrate that either Hudson or Dwek describe the elements of these claims that are identified by the parties as 5a, 10a, 11a, and 16d.

Each of dependent claims 5 and 10 and independent claims 11 and 16 recite: “selecting a song for one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music.” Ex. 1001, 16:65–67 (claim 5), 17:63–65 (claim 10), 18:20–22 (claim 11), 19:5–7 (claim 16). Petitioner contends that Dwek describes these limitations to which the parties refer as 5a, 10a, 11a, and 16d. Pet. 33–37 (element 5a), 46 (element 10a), 48–49 (element 11a), 53 (element 16d).⁴ Petitioner provides detailed argument and evidence only in connection with limitation 5a, and then Petitioner incorporates that argument and evidence by reference when addressing limitations 10a, 11a, and 16d. *Id.* Based on our review of the evidence cited by Petitioner, we conclude that Petitioner has

⁴ Claims 12–15 directly or indirectly depend from claim 11, and thus also include limitation 11a. Ex. 1001, 18:46–63. Claims 17–20 directly or indirectly depend from claim 16, and thus also include limitation 16d. *Id.* at 20:4–22.

failed to establish by a preponderance of evidence that Dwek describes limitation 5a.⁵

Petitioner first contends that limitation 5a is “confusing” through its use of “for,” and, to address the alleged confusion, it proposes and analyzes an alternative interpretation of limitation 5a as reciting “from” instead of “for.” *Id.* at 33–37. Because Petitioner cites no persuasive evidence that “for” should be read as “from” in limitation 5a, we reject Petitioner’s alternative interpretation. Regardless, Petitioner’s showing that Dwek describes limitation 5a under either interpretation is unpersuasive. Petitioner’s argument is based upon its citation of two passages in Dwek, neither of which describes a “channel” that is “associated with a genre of music.” We address each cited portion of Dwek in turn.

Petitioner first cites Dwek’s description of “channels,” which reads:

Channels are analogous to radio stations, providing a continuous stream of music selections from the online music service system 100. For each channel, music selections are played from a very long carousel. Although one or more music selections may repeat more frequently, the length of the total play cycle may be several days or longer. Moreover, in some cases music selections matching certain target criteria for a channel may be randomly selected and played in a channel.

In a preferred embodiment, the online music system 100 includes three different types of channels, namely, preprogrammed channels, user-defined channels, and shared channels. Preprogrammed channels are channels which are programmed by the online music provider to fit popular musical formats such as might exist on conventional broadcast radio.

⁵ To simplify our discussion, we refer only to limitation 5a.

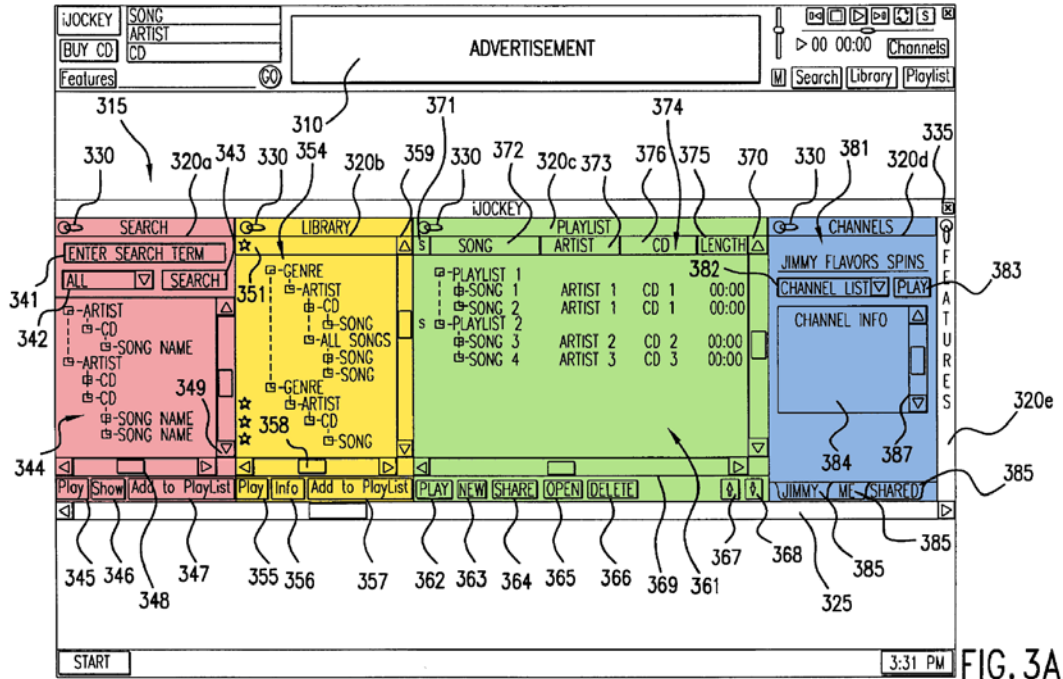
Id. at 35 (quoting Ex. 1006, 9:62–10:9). The quoted portion of Dwek does not expressly address genre at all. Ex. 1006, 9:62–10:9. Instead, it merely sets forth three types of channels that a user may select. The closest this quoted portion comes to addressing a concept similar to “genre” is when Dwek states that its “pre-programmed” channels are programmed “to fit popular musical formats such as might exist on conventional broadcast radio.” *Id.* at 10:7–9.

Attempting to argue that Dwek’s pre-programmed channels are channels associated with a musical genre, Petitioner and Dr. Shamos rely upon a portion of Dwek addressing a user’s interaction with subpane 354 in library pane 320b, which reads:

In a preferred embodiment, at a topmost hierarchical level a list of musical genres is provided in the database display subpane 354, for example, classical music, country music, show tunes, rock music, jazz music, etc. A list of subgenres may also be provided at a next topmost hierarchical level, for example, within the rock music genre, there may be several subgenres, such as oldies rock, classic rock, heavy metal, grunge rock, etc. At successive lower hierarchical levels, music selections may be classified by recording artist, CD or album title, and song title. A user may select or “click” on an expansion box to view or hide various hierarchical levels.

Pet. 35–36 (quoting Ex. 1006, 7:31–42); *see also* Ex. 1003 ¶ 67 (citing Ex. 1006, 7:31–42). Neither passage indicates that Dwek’s online music provider *selects* any song “for one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music.”

Our review of Dwek’s interface leads to the same conclusion. Subpane 354 appears in library pane 320b, which is shown highlighted in yellow in our colorized reproduction of Dwek’s Figure 3A below.



Dwek’s colorized Figure 3A illustrates an exemplary user interface for its music player with search pane 320a highlighted red, library pane 320b highlighted yellow, playlist pane 320c highlighted green, and channels pane 320d highlighted blue. Ex. 1006, 5:57–60.

“A user may add songs to a playlist through the search pane 320a [red] or the library pane 320b [yellow].” *Id.* at 9:1–2. “[S]earch pane 320a [red] provides an interface with the client interface server 112 for allowing the user to browse or search the online music database 114 to locate a particular music selection which may be referenced by song title, artist, album or CD title, *musical genre*, etc.” *Id.* at 6:15–19 (emphasis added). “[I]f the user highlights one or more music selections in the database display subpane 354 [in yellow library pane 320b] and selects the add button 357, then the highlighted music selection(s) may be added to a playlist of music selections to be delivered to the user’s music player 120.” *Id.* at 8:18–22. Each song in Dwek’s music database 114 “is indexed by song title, musical

artist, album or compact disc (CD) title, one or more corresponding *musical genres*, and/or year the recording was made.” *Id.* at 4:49–52 (emphasis added). All these passages indicate that Dwek indexes individual songs by “genre” without indicating anything about “selecting a song for one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music.”

Of Dwek’s three types of “channels,” none is described as comprising songs that are selected to be “associated with a genre of music.” Users interact with channels in channels pane 320d (highlighted blue above). Channels pane 320d (blue), which is focused on pre-programmed channels in Figure 3A as shown by tab 385 labeled “Jimmy” being displayed in the foreground, reflects information about an exemplary “active” pre-programmed channel entitled “Jimmy Flavors Spins.” *Id.* at 10:21–24. Information about the selected channel appears in display subpane 384, and a user starts listening to the “Jimmy Flavor Spins” channel “in progress” by pressing play button 383. *Id.* at 10:25–34. This exemplary title of the channel says nothing about the genre of songs selected for the channel.

Online music system 100 automatically creates user-defined channels in response to information provided by a user. *Id.* at 10:14–16. When channels pane 320d (blue) is focused on user-defined channels by pressing the “ME” tab, the user can “enter his or her musical preferences for the channel, together with a channel name.” *Id.* at 10:55–56, *see also id.* Figure 3B. “The musical preferences are used to create parameters for the online music system 100 to automatically program the user-defined channel.” *Id.* at 56–59. The user may later revise his “musical preferences” to “change the musical format of the user-defined channel.” *Id.* at 60–67.

However, Dwek does not describe selecting songs for a channel associated with a genre of music.

Shared channels contain songs arranged into playlists that were created by users interacting with playlist pane 320c (highlighted green in Figure 3A above). *Id.* at 7:5–12, 8:18–25 (describing insertion of user-selected songs in search pane 320a (red) or library pane 320b (yellow) into playlists in playlist pane 320c (green)). After a user makes a playlist, they may share that playlist on a “shared channel” by pressing share button 364. *Id.* at 9:31–32. The user may also enter information about the “playlist to be shared, such as the user’s name or alias, the total playtime, musical theme, etc.” *Id.* at 9:37–39. If another user selects a shared channel, this information entered by the creator of the channel appears in subpane 384 of channels pane 320d (blue). *Id.* at 11:21–23. Dwek says nothing further about what constitutes a “musical theme” or that the creator of a shared channel must enter “musical theme” information or select any or all songs for the channel according to a “musical theme” or from a single genre.

Neither Petitioner nor Dr. Shamos address whether a user’s ability to provide information about a “musical theme” constitutes selecting a song for a channel that is associated with a musical genre. *See generally* Pet., Reply, Ex. 1003, Ex. 1021 (failing to discuss theme at all). Petitioner argues that Dr. Russ “admits, ‘shared channels’ may be directed to a ‘genre.’” Reply 11 (citing Ex. 2109 ¶¶ 51, 63). Petitioner’s argument relies on Dr. Russ’s reference to Dwek’s “shared music genre channels.” *Id.* However, Petitioner specifically asked Dr. Russ “Does Dwek disclose music channels that are based upon musical genre?” Ex. 1020, 40:20–21. In response, Dr. Russ discusses all three types of channels that Dwek describes, but

concludes only that “Dwek discloses that there is what it calls a channel that has, you know, music to fit a popular format.” *Id.* at 41:3–18. We determine that Dr. Russ’s testimony falls short of an “admission” that Dwek described any channel associated with a genre of music. Although it may be possible for a user of Dwek’s player to create a shared channel that is associated with a musical genre, Petitioner makes no such showing or ever argues that the existence of such a possibility is sufficient to demonstrate that Dwek describes limitation 5a.

For all these reasons, we determine that Petitioner has failed to establish by a preponderance of evidence that either Dwek or Hudson describes limitations 5a, 10a, 11a, or 16d. Accordingly, we conclude that Petitioner has failed to establish by a preponderance of evidence that the combination of Hudson and Dwek renders claims 5, 10, 11, and 16 unpatentable as obvious. Because claims 12–15 depend from claim 11 and claims 17–20 depend from claim 16, Petitioner also fails to establish that the combination of Hudson and Dwek render these dependent claims unpatentable as obvious.

H. OTHER ARGUMENTS RELATING TO CLAIMS 5, 11, AND 16

Patent Owner raises other arguments relating to patentability of claims 5, 11, and 16. *See* PO Resp. 22–27 (arguing that Petitioner fails to demonstrate motivation to combine for claims 11 and 16), 31–32 (arguing that Petitioner fails to demonstrate that Hudson and Dwek describe limitations 5c, 11c, and 16f). We do not address these arguments because they are moot in view of our conclusion in Part II.G above that Petitioner has failed to establish that these claims are unpatentable.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that the combination of Hudson and Dwek renders claims 1–4 and 6–9 unpatentable as obvious. Petitioner has not demonstrated by a preponderance of the evidence that the combination of Hudson and Dwek renders claims 5 and 10–20 unpatentable.

IV. ORDER

For the reasons given, it is:

ORDERED, based on a preponderance of evidence, that claims 1–4 and 6–9 of U.S. Patent 9,351,045 B1 have been shown to be *unpatentable* as obvious under 35 U.S.C. § 103 in view of the combined teachings of Hudson and Dwek;

FURTHER ORDERED that claims 1–4 and 6–9 of U.S. Patent 9,351,045 B1 shall be *anceled*;

FURTHER ORDERED that, based on a preponderance of evidence, claims 5 and 10–20 of U.S. Patent 9,351,045 B1 have not been shown to be unpatentable as obvious under 35 U.S.C. § 103 in view of the combined teachings of Hudson and Dwek; and

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

STINGRAY DIGITAL GROUP INC.,
Petitioner,

v.

MUSIC CHOICE,
Patent Owner.

Case IPR2017-01191
Patent 9,351,045 B1

HORVATH, *Administrative Patent Judge, dissenting-in-part.*

I. INTRODUCTION

I respectfully dissent from Section II.G of the majority's decision in which the majority finds Petitioner has failed to show, by a preponderance of evidence, that claims 5 and 10–20 of the '045 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Dwek and Hudson.

The majority's analysis finds Petitioner has failed to meet its burden with respect to these claims because Petitioner has failed to demonstrate that the combination of Dwek and Hudson teaches or suggests “selecting a song for one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music” as recited in claims 5 and 10–20 as limitations 5a, 10a, 11a, and 16d. I respectfully disagree.

II. ANALYSIS

Petitioner proposes combining “the playlist creation and selection features of Dwek with the on-demand playback system of Hudson” in order to “enhance the advertiser’s ability to reach end users in an unobtrusive and effective way.” Pet. 16. As the majority finds in Section II.E, *supra*, Petitioner’s reasoning is sufficient for combining the teachings of Dwek and Hudson to establish the unpatentability of claims 1 and 6.

A. CLAIM 5

In its analysis of claim 5, Petitioner clarifies that the “selection features of Dwek” that are to be combined with the “on-demand playback system of Hudson” include Dwek’s selection of preprogrammed music channels. Pet. 34–35. Petitioner sufficiently demonstrates that Dwek’s preprogrammed music channels “are programmed by the online music provider to fit popular musical formats such as might exist on conventional broadcast radio.” *Id.* at 35 (citing Ex. 1006, 9:62–10:9). Petitioner argues that a person skilled in the art would recognize these “preprogrammed channels include genre-based channels, such as ‘classical,’ ‘jazz,’ and *other musical categories such as those identified in Dwek.*” *Id.* (citing Ex. 1006, 7:31–42; Ex. 1003 ¶¶ 67–68) (emphasis added). That is, Petitioner argues that Dwek’s online music delivery system 100 allows a user to select a preprogrammed music channel that is associated with a particular musical format, such as any one of the musical genres used to organize Dwek’s online musical database 114, e.g., “classical music, country music, show tunes, rock music, jazz music, etc.” Ex. 1006, 7:31–38.

Petitioner’s evidence and argument persuasively demonstrates that a person skilled in the art would have understood the combination of Dwek

and Hudson teaches or suggests user selection of a preprogrammed music channel associated with a musical format (e.g., a preprogrammed “rock music” channel), resulting in “a music provider . . . select[ing] songs for music channels associated with a genre of music, and transmit[ing] these songs to a plurality of users tuned to that channel.” Pet. 33–34. This is all that is required by limitations 5a and 5b of claim 5 of the ’045 patent. Patent Owner does not dispute this.

Limitation 5c of the ’045 patent requires transmitting a video identifier identifying a second video to a second client system while transmitting the audio data for the selected musical channel to a plurality of client systems. Ex. 1001, 17:8–10. Petitioner argues Hudson teaches this limitation because Hudson discloses transmitting video identifiers for ancillary content as disclosed in limitation 1d, and further teaches the ancillary content can be tailored to and transmitted to different users of different client systems based on “the demographics and/or view habits” of the different users. Pet. 38 (citing Ex. 1004 ¶ 27; Ex. 1005 ¶ 52) (relying on Hudson’s incorporation by reference of the entire contents of Headings).

Patent Owner argues Petitioner has failed to show the combination of Dwek and Hudson teaches or suggests this limitation because Hudson’s interface links are not transmitted *with* the media assets, but are instead “delivered separately from the video stream.” PO Resp. 31–32 n.4 (citing Pet. 27; quoting Ex. 1004 ¶ 11). Patent Owner’s argument is unpersuasive because it selectively quotes from only a portion of Hudson’s paragraph 11, relied on by Petitioner, and ignores the portion that expressly discloses multiplexing and transmitting interface links *with* media assets. In particular, Hudson discloses “interface links may be delivered separately

from the video stream such that the links overlay the video stream content when displayed to the user . . . *or the interface links may be embedded in the video stream itself.*” Ex. 1004 ¶ 11.

The remaining limitations of claim 5 require receiving from the second client system a message that the user wishes to view the second video identified by the second video identifier while the audio data is being transmitted, and transmitting the second video to the second client system. Ex. 1001, 17:11–23. Petitioner relies on its analysis of limitations 1e and 1f to meet these limitations of claim 5. Pet. 39–40. Like the corresponding limitations recited in claim 5, limitations 1e and 1f require receiving a message from a client system that a user wishes to view a video identified by a video identifier while a media asset is being transmitted, and transmitting the video to the client system. *Compare* Ex. 1001, 16:42–55, *with id.* at 17:11–23. As the majority finds in Section II.E.2, *supra*, Petitioner persuasively demonstrates that the combination of Dwek and Hudson teaches these limitations, despite Patent Owner’s argument to the contrary with respect to limitation 1f.⁶

Accordingly, for the reasons discussed above, I find Petitioner has demonstrated by a preponderance of evidence that a person skilled in the art would have had a rational reason to combine the teachings of Dwek and Hudson, including Dwek’s selection of a preprogrammed music channel

⁶ Regarding limitation 1f, I Patent Owner argues the combination of Dwek and Hudson fails to teach or suggest ceasing transmission of the media asset upon receiving the message that the user wishes to view a selected video. Claim 5, however, does not require the on-demand system to “cease” transmission of the media asset, although Hudson teaches this limitation as discussed in the majority’s decision at Section II.E.2.b, *supra*.

associated with a genre of music, and that the combination teaches or suggests all of the limitations required by claim 5. Therefore, I find Petitioner has demonstrated by a preponderance of evidence that claim 5 is unpatentable under 35 U.S.C. § 103(a) as obvious over Dwek and Hudson.

B. CLAIM 10

Claim 10 depends from claim 6, and is directed toward a video on-demand system that performs the method recited in claim 5. Petitioner relies on Hudson for teaching the transmitter, receiver, and computer limitations of claim 6, but otherwise relies on its analysis of claim 5 for teaching the remaining limitations of claim 10. Pet. 40–48. As the majority finds in Section II.E, *supra*, Petitioner demonstrates the unpatentability of claim 6 over the combination of Dwek and Hudson. For the reasons discussed above, I find Petitioner also demonstrates the combination of Dwek and Hudson teaches or suggests the remaining limitations of claim 10 that correspond to the limitations of claim 5.

Accordingly, I find Petitioner has demonstrated by a preponderance of evidence that claim 10 is unpatentable under 35 U.S.C. § 103(a) as obvious over Dwek and Hudson.

C. CLAIMS 11–20

Claim 11 recites a video on-demand method that includes all of the limitations of dependent claim 5 except for the limitations recited in claim 1, from which claim 5 depends. *Compare* Ex. 1001, 18:19–45, *with id.* at 16:63–17:23. Claim 16 recites a video on-demand system that includes all of the limitations of dependent claim 10 except for the limitations recited in claim 6, from which claim 10 depends. *Compare id.* at 18:64–20:3, *with id.* at 17:61–18:18. Thus, claim 11 is broader than claim 5, and claim 16 is

broader than claim 10. Petitioner argues claim 11 is unpatentable over the combination of Dwek and Hudson for the same reasons as claim 5, and argues claim 16 is unpatentable over the combination for the same reasons as claim 10. Pet. 48–50, 52–54.

Patent Owner argues:

Petitioner asserts only one reason why a POSITA [person of ordinary skill in the art] would be motivated to combine Hudson and Dwek: because “[a] POSITA would recognize the advantages of combining the customizable playlist of Dwek with the interactive linear storyboard playlists of Hudson.” Pet. at 14. Those advantages, according to Petitioner, are letting users customize their playlist/storyboards, which lets advertisers in turn better customize their ads. *Id.* at 15-16.

PO Resp. 23. Patent Owner further argues that this reasoning is insufficient to establish that a person skilled in the art would have had a reason “to combine any music genre channels of Dwek with Hudson’s videos with interactive storyboards” because the reasoning “is not even remotely applicable to claims 11 and 16, which . . . do not include creating playlists.” *Id.* at 23–24. Patent Owner’s argument is not persuasive.

First, Patent Owner construes Petitioner’s reasoning to combine the teachings of Dwek and Hudson too narrowly. Petitioner also argues that a person skilled in the art would have found it obvious “to combine the playlist creation and selection features of Dwek with the on-demand playback system of Hudson” in order to “enhance the user’s experience with control over media playback choices” and to “enhance the advertiser’s ability to reach end users in an unobtrusive and effective way.” Pet. 16 (citing Ex. 1003 ¶¶ 45–46).

As explained above, Petitioner’s proposed combination of Dwek and Hudson includes Dwek’s ability to select not only customized playlists, but

also preprogrammed music channels associated with a musical genre. Pet. 18–21, 33–36. Enhancing user control over media playback choices (whether playlists as recited in claims 1, 5, 6, and 10, or preprogrammed music channels as recited in claims 5, 10, 11, and 16) and enhancing an advertiser’s ability to reach or target a user based on the user’s media playback choices are, therefore, sufficient reasons to combine the teachings of Dwek and Hudson for any of claims 1, 5, 6, 10, 11, and 16. *See KSR*, 550 U.S. at 419 (“In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.”).

Second, as noted above, claims 11 and 16 are respectively broader than claims 5 and 10. Therefore, because I find narrower claims 5 and 10 to be unpatentable over the combined teachings of Dwek and Hudson, I necessarily find broader claims 11 and 16 to be unpatentable over the combined teachings of Dwek and Hudson. *Cf. Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1344 (Fed. Cir. 2009) (“A broader independent claim cannot be nonobvious where a dependent claim stemming from that independent claim is invalid for obviousness.”).

Patent Owner also argues that the combination of Dwek and Hudson wouldn’t work for its intended purpose because “Dwek’s shared music genre channels would send URLs to multiple users at the same time,” making it “likely that [the system’s] servers will be flooded with simultaneous requests for content.” PO Resp. 26. Patent Owner’s argument is not persuasive.

First, Petitioner demonstrates that not all of the users that are tuned to a particular music channel in the Dwek/Hudson combination would receive

the same links to ancillary content because Hudson teaches that “different ancillary content (such as links to different advertisements) would be sent to different users based on demographics, such as a user’s age.” Pet. 38 (citing Ex. 1004 ¶ 27; Ex. 1005 ¶ 52) (relying on Hudson’s incorporation by reference of Headings in its entirety).

Second, Patent Owner’s argument amounts to an allegation that the combination *could* result in a server overload problem, which is insufficient to show that “the combination *would* produce a ‘seemingly inoperative device.’” *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1354 (Fed. Cir. 2001).

Third, Hudson’s system consists of a plurality of endpoint servers 100, each of which contains a media content database 110. Ex. 1004 ¶¶ 21–22, Fig. 1. Hudson further teaches “the number of servers may range from *one to many depending upon the system requirements to be met*. Likewise, the system architecture between *individual servers may be varied and load-balanced in known ways* in order to provide optimal system efficiency.” *Id.* ¶ 22 (emphases added).

D. CLAIMS 12–15 AND 17–20

Claims 12–15 depend directly or indirectly from claim 11, and claims 17–20 depend directly or indirectly from claim 16. Ex. 1001, 18:46–62, 20:4–21. Petitioner demonstrates how each of the limitations recited in claims 12–15 and 17–20 correspond to limitations recited in claims 1–3. Pet. 50–52, 54–56. Petitioner, therefore, argues (a) the combination of Dwek and Hudson teaches all of the limitations recited in claims 12–15 and 17–20 for the same reasons the combination teaches all the limitations of

claims 1–3, and (b) claims 12–15 and 17–20 are unpatentable as obvious over the combination of Dwek and Hudson. *Id.*

As the majority finds in Sections II.E and II.F, *supra*, Petitioner has shown by a preponderance of evidence that the combination of Dwek and Hudson teaches all the limitations of claims 1–3 and renders those claims unpatentable as obvious. For the reasons discussed above, I find Petitioner has shown by a preponderance of evidence that the combination of Dwek and Hudson teaches all the limitations of claims 11 and 16, from which claims 12–15 and 17–20 depend, and has articulated sufficient reasons to combine the teachings of Dwek and Hudson for any of claims 1, 5, 6, 10, 11, and 16.

Accordingly, I find Petitioner has demonstrated by a preponderance of evidence the unpatentability of claims 12–15 and 17–20 under 35 U.S.C. § 103(a) as obvious over Dwek and Hudson.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

STINGRAY DIGITAL GROUP INC.,
Petitioner,

v.

MUSIC CHOICE,
Patent Owner.

Case IPR2017-01191
Patent 9,351,045 B1

WEATHERLY, Administrative Patent Judge, concurring expressing additional views.

I write separately to express my view that Petitioner's challenges to claims 5 and 10–20 suffer additional fatal infirmities beyond those already identified in the majority opinion.

I. BACKGROUND

Claim 5, which depends from claim 1, adds limitations relating to transmitting a song that is selected for a channel associated with a genre of music. *Id.* at 16:63–17:23 (claim 5). Claim 10 introduces virtually identical limitations as those introduced in claim 5, but claim 10 depends from claim 6 rather than claim 1. *Compare* Ex. 1001, 17:61–18:18 (claim 10), *with id.* at 16:63–17:23 (claim 5); *see also* Pet. 46–48 (quoting side-by-side language from claims 5 and 10). Independent claim 11 is devoted entirely to the limitations that were introduced in claim 5 and recites substantially

similar limitations. *Compare* Ex. 1001, at 18:19–45 (claim 11), *with id.* at 16:63–17:23 (claim 5); *see also* Pet. 48–50 (quoting side-by-side language from claims 5 and 11). Independent claim 16 recites a video on demand system that is configured to perform the steps of the method recited in claim 11. *Compare* Ex. 1001, 18:19–45 (claim 11), *with id.* at 18:64–20:3 (claim 16); *see also* Pet. 53–54 (comparing quoted text from claims 11 and 16). I refer collectively to the limitations introduced in claims 5 and 10, and also substantively recited in claims 11 and 16 as the “genre channel limitations.” The parties identify the genre channel limitations as elements 5a–5e, 10a–10e, 11a–11e, and 16d–16g.⁷

Patent Owner argues that Petitioner has failed to provide any reason why an ordinarily skilled artisan would have been motivated to combine teachings of Dwek and Hudson to meet the genre channel limitations recited in claims 11 and 16. PO Resp. 23–25. Because claims 5 and 10 also include the genre channel limitations, I conclude that Patent Owner’s argument applies equally to claims 5 and 10.⁸ Patent Owner’s argument raises the issue of whether a petitioner must prove that an ordinarily skilled artisan would have had distinct reasons to combine teachings from multiple prior art references for claims that substantively differ from each other. I believe the answer is yes.

⁷ Because claims 6–9 depend from claim 5, claims 12–15 depend from claim 11, and claims 17–20 depend from claim 16, all these claims also include the genre channel limitations.

⁸ In its Preliminary Response, Patent Owner made a similar argument regarding claims 5, 10, 11, and 16, Prelim. Resp. 26–29, but expressly addresses only claims 11 and 16 in its Patent Owner Response, PO Resp. 22–25.

II. LEGAL STANDARD

“[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The Court further noted that:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; . . . in order to determine whether there was an apparent reason to *combine the known elements in the fashion claimed by the patent at issue*. To facilitate review, *this analysis should be made explicit*. See *In re Kahn*, 441 F.3d 977, 988 (C.A.Fed.2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

Id. (emphases added). Recently, the Federal Circuit analyzed whether a petitioner in an *inter partes* review had demonstrated separate motivations to combine teachings from a single pair of prior art references for substantively different claims. *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1069 (Fed. Cir. 2018). At issue in *Polaris* was U.S. Patent 8,596,405 B2 (the “’405 patent”) entitled “Side-by-Side ATV.” *Id.* at 1059; Ex. 3001, cover page. Arctic Cat challenged claims 1, 16, and 17,⁹ among others, as obvious in view of combined teachings from a pair of prior art patents, Denney and Furuhashi. *Polaris*, 882 F.3d at 1062–63. The analysis of claim 1 focused on whether Arctic Cat had proven “motivation to combine the dune buggy disclosed in Denney with the ATV disclosed in Furuhashi.” *Id.* at 1070–71. Claim 16 added limitations specifying the location of the front driveshaft.

⁹ Claim 17 depends from claim 16, which depends from claim 15, which indirectly depends from claim 1. Ex. 3001, 11:35–66 (specifying ultimate dependency of claims 16 and 17 from claim 1 of ’405 patent).

Ex. 3001, 11:64–65. Claim 17 added limitations specifying the location of a fuel tank. *Id.* at 11:66–12:2.

The court separately analyzed whether Arctic Cat had proven motivation to include the limitations added in claims 16 and 17. *See Polaris*, 882 F.3d at 1066–67 (analyzing motivation for claim 16), 1067–68 (analyzing motivation for claim 17). Based on these separate analyses, the court affirmed the Board’s decision that motivation to combine was shown for claims 1 and 16, but not for claim 17. *See id.* at 1071 (claim 1), 1067 (claim 16), 1068 (claim 17). Although the court never explicitly stated that a petitioner must separately prove motivation to combine teachings of prior art references on a claim-by-claim basis, it performed its analysis in a manner implying that such a requirement exists when different claims recite substantively different limitations.

III. ANALYSIS

Here, the genre channel limitations of claims 5, 10, 11, and 16 substantively differ from the step of “creating a playlist” recited in claim 1. I conclude that Petitioner was obliged under *KSR* and *Polaris*, but has failed, to show that an ordinarily skilled artisan would have had a motive distinct from the motive expressed for arriving at claim 1 to modify Hudson in view of Dwek to arrive at the inventions recited in claims 5, 10, 11, and 16 and their respective dependent claims.

In its Reply, Petitioner unpersuasively argues that it did so in its Petition for claims 11 and 16.¹⁰ Reply 10–12. Initially, Petitioner argues

¹⁰ Petitioner does not address this issue as it relates specifically to claims 5 and 10. Reply 10–12 (addressing only claims 11 and 16). Nevertheless, just

that we addressed and “decided” this issue in its favor in our Institution Decision. *Id.* at 10–11 (citing Dec. 21). I disagree. Instead, the panel exercised its discretion to institute Petitioner’s challenges to claims 5, 10, 11, and 16 based on our independent preliminary review of Dwek, which revealed that users could create a shared channel based on a playlist and describe a “musical theme” for that shared channel. Dec. 21 (citing Ex. 1006, 11:9–13, 11:23–33). The panel also noted that Petitioner continued to bear the burden of persuasion for demonstrating that claims 5, 10, 11, and 16 were unpatentable. *Id.* at 22. Based on the record developed at trial, I conclude that Petitioner has failed to carry that burden.

Attempting to carry that burden, Petitioner first argues that it relied upon Dwek’s disclosure of shared channels in its expressed reason for modifying Hudson in view of Dwek by revising a sentence from its Petition as follows: “a POSITA would recognize the advantages of combining the customizable playlist of Dwek [which includes the ‘shared channels’ functionality] with the interactive linear storyboard playlists of Hudson.” Reply 11 (quoting with alterations Pet. 15). The material in square brackets was neither present in the quoted sentence from the Petition nor any other part of the Petition. *See* Pet. 14–16 (expressing the entirety of Petitioner’s argument regarding motives for combining teachings of Hudson and Dwek but failing to address any aspect of a user’s ability to share channels based on playlists that she created). The Petition never cites Dwek’s description in column 11 of how its user can create a shared channel based upon her

as I have done in connection with Patent Owner’s arguments, I consider Petitioner’s Reply arguments to apply equally to claims 5 and 10.

playlist. The Petition also fails to describe how such a shared channel is associated with a musical genre.

Second, Petitioner unpersuasively relies upon Dr. Shamos' original testimony as demonstrating that "Dwek's channels are a feature of Dwek's customizable playlists because each channel corresponds to a playlist." Reply 11–12 (citing Ex. 1003 ¶ 68). However, the cited testimony relates to Dr. Shamos' opinion that Dwek describes an alternative interpretation of element 5a as reciting "selecting a song **from** one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music." Ex. 1003 ¶ 68 (citing Ex. 1006 7:31–42). Dr. Shamos' opinion relates to an inaccurate, incorrect, and unsupported reading of element 5a, which actually recites "selecting a song *for* one of a plurality of music channels, the one of the plurality of music channels being associated with a genre of music." Ex. 1001, 16:65–67 (emphasis added). Additionally, Dr. Shamos relies upon disclosure in Dwek that does not support his opinion because the cited portion of Dwek relates to the manner in which a user may browse or search for songs in library pane 320b based upon the genre associated with a *song*, not a channel. Ex. 1006, 7:25–47 (describing browsing musical database 114 in library pane 320b and marking "music selections of interest" for "easy retrieval in the future"). The cited portion of Dwek, therefore, does not establish that playlists are channels or that channels are a "feature" of its playlists. Instead, the cited portion of Dwek merely describes how a user finds songs in Dwek's music library 114.

Third, Petitioner relies upon new testimony from Dr. Shamos in an attempt to recast its original showing of motivation for incorporating Dwek's playlist functionality into a showing of motivation for also

incorporating genre-based channels allegedly described by Dwek with Hudson's storyboard-based media distribution system. Reply 12 (citing Ex. 1021 ¶ 19). Dr. Shamos testifies that:

[A] POSITA would understand that Dwek discloses that a user may save and edit a channel playlist to select and reorder the content that she sees. Thus, a POSITA seeking to combine Dwek's customizable playlists with Hudson would include Dwek's channels as they are simply playlists that users may save and customize. Accordingly, for the reasons provided above and in my declaration, a POSITA would be motivated to combine the channels of Dwek with Hudson's storyboard. (Ex. 1003-Shamos at ¶¶ 40–46).

Ex. 1021 ¶ 19. Dr. Shamos cites paragraphs 40–46 of his original Declaration. *Id.* However, that cited testimony wholly fails to address any aspect of any of the pre-programmed, user-defined, or shared channels that Dwek describes. *See* Ex. 1003 ¶¶ 40–46 (citing Ex. 1006, 1:31–50, 3:28–57, neither of which relates to Dwek's channels). At most, the cited portions of Dwek establish that Dwek (1) realized that users wish to control the music they hear, (2) recognized that traditional internet radio stations could be distributed over the internet, and (3) believed that giving users control over music selections and access to music over the internet is advantageous to advertisers. Ex. 1006, 1:31–50, 3:28–57.

A petition must identify “in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.”

35 U.S.C. § 312. The Federal Circuit has described adherence to this requirement as being “of the utmost importance.” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016). Our Rules similarly require that a petition “must specify where each element of

the claim is found in the prior art patents or printed publications relied upon” including “specific portions of the evidence that support the challenge.”

37 C.F.R. § 42.104(b)(4), (5). A reply brief does not provide an opportunity for a petitioner to change its theory or rely upon new parts of the record to prove its case. Instead, the “reply may only respond to arguments raised in the . . . patent owner response.” 37 C.F.R. § 42.23(b).

Petitioner’s presentation of its new theory of unpatentability based on citations to new portions of Dwek and new opinions from Dr. Shamos. Although these new citations and opinions literally respond to Patent Owner’s argument, they also fundamentally alter Petitioner’s challenge to claims 5, 10, 11, and 16, and should have been reflected in the Petition under 37 C.F.R. § 42.104(b)(4),(5).

For all the reasons set forth above, I would conclude that Petitioner has failed to establish any reason for combining teachings of Hudson and Dwek to meet the genre channel limitations as set forth in claims 5, 10, 11, and 16. Because claims 12–15 and 17–20 depend from claims 11 and 16 respectively, Petitioner’s challenge to the patentability of these claims would also fail.

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