

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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STINGRAY DIGITAL GROUP INC.,  
Petitioner,

v.

MUSIC CHOICE,  
Patent Owner.

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Case IPR2017-01192  
Patent 8,769,602 B1

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

WEATHERLY, *Administrative Patent Judge*.

DECISION

Instituting *Inter Partes* Review  
35 U.S.C. § 314, 37 C.F.R. §§ 42.4, 42.108

I. INTRODUCTION

A. BACKGROUND

Stingray Digital Group Inc. (“Petitioner”) filed a petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1–11 (the “challenged claims”) of U.S. Patent No. 8,769,602 B1 (Ex. 1001, “the ’602 patent”). 35 U.S.C. § 311. Music Choice (“Patent Owner”) timely filed a Preliminary

Response. Paper 5 (“Prelim. Resp.”). Institution of an *inter partes* review is authorized by statute when “the information presented in the petition filed under section 311 and any response filed under section 313 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); 37 C.F.R. § 42.108. Based on our review of the record, we conclude that Petitioner is reasonably likely to prevail with respect to at least one of the challenged claims.

Petitioner contends that the challenged claims are unpatentable under 35 U.S.C. §§ 102 and/or 103 based on the following grounds (Pet. 9–60):

<b>References</b>	<b>Basis</b>	<b>Claims challenged</b>
International Patent Publication WO 00/19662 A1 (Ex. 1004, “Mackintosh”)	§ 102(b)	1–7
Mackintosh and Hallier, J., Multimedia Broadcasting to mobile, portable and fixed Receivers using the Eureka 147 Digital Audio Broadcasting System; 5th IEEE Int’l Symposium on Personal, Indoor and Mobile Radio Comm., 794-99 (Sept. 18–22, 1994) (The Hague, The Netherlands) (Ex. 1005, “Hallier”)	§ 103	8–11

Generally, Patent Owner contends that the Petition should be denied in its entirety. For the reasons described below, we institute an *inter partes* review of all claims on all challenges to patentability.

#### 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

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identifies a number of other applications, patents, or proceedings as being related to this proceeding, including:

1. *Stingray Digital Group Inc. v. Music Choice*, Case IPR2017-01193 (PTAB), involving related U.S. Patent No. 9,357,245 B1;
2. U.S. Patent Application Serial Number 60/315,046, filed on August 28, 2001 (Expired);
3. U.S. Patent Application Serial Number 10/066,793, issued as U.S. Patent No. 7,275,256 B1 on September 25, 2007;
4. U.S. Patent Application Serial Number 11/837,772, issued as U.S. Patent No. 7,926,085 B2 on April 12, 2011;
5. U.S. Patent Application Serial Number 14/314,379, issued as U.S. Patent No. 9,451,300 B1 on September 20, 2016;
6. U.S. Patent Application Serial Number 14/635,619, issued as U.S. Patent No. 9,357,245 B1 on May 31, 2016; and
7. U.S. Patent Application Serial Number 15/266,799, filed on September 15, 2016 (Pending).

Paper 4, 2–3.

#### C. THE '602 PATENT

The '602 patent is directed toward a system and method for providing an interactive, visual complement to one or more audio programs. Ex. 1001, Abstract. Figure 1 of the '602 patent is reproduced below.

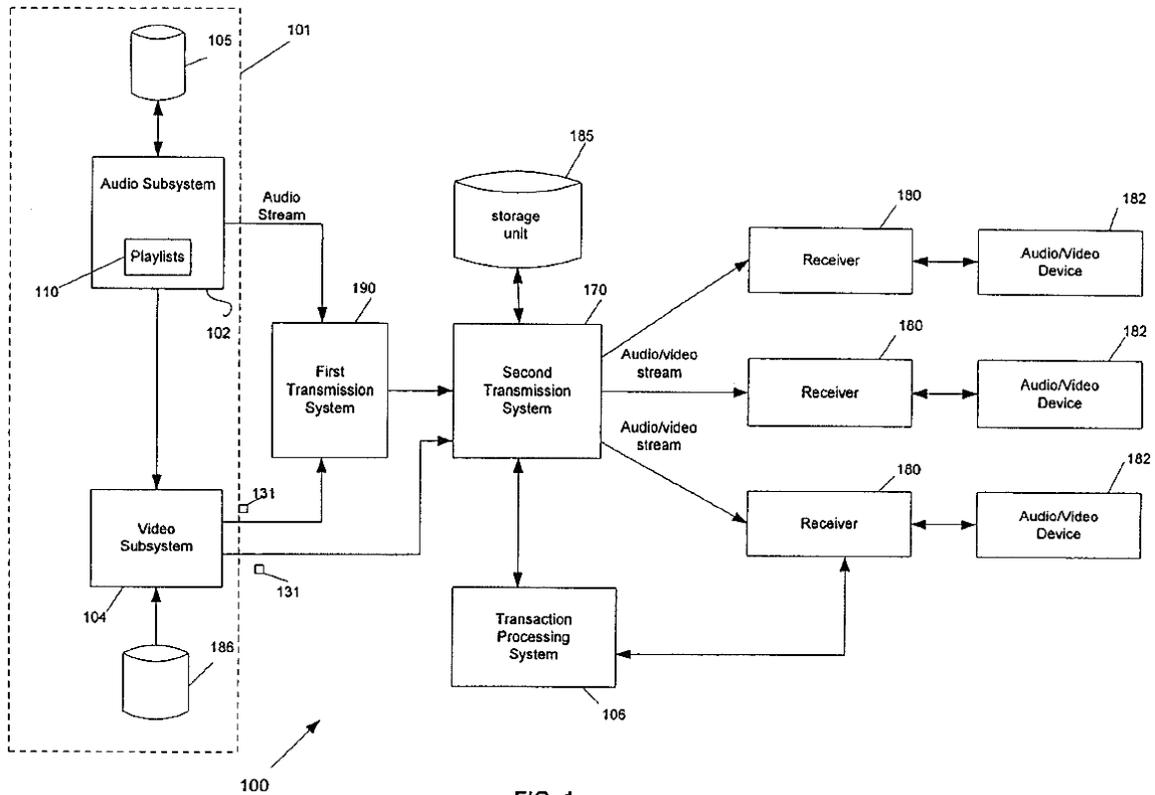


FIG. 1

Figure 1 is a block diagram of audio/video system 100 for providing audio/video programming to consumers. *Id.* at 2:58–60. System 100 includes audio subsystem 102 having playlist 110, video subsystem 104, first transmission system 190, second transmission system 170, receivers 180, and audio/video devices 182. *Id.* at 4:6–32. Playlist 110 contains programmed sound recordings for transmission to listeners of system 100 over a particular broadcast channel, and is typically generated on a periodic basis (e.g., daily or weekly). *Id.* at 4:7–12. Audio subsystem 102 transmits the programmed sound recordings to transmission subsystem 190, which further transmits the recordings to signal transmission system 170, which transmits the recordings to audio/video receivers 180. The latter are coupled to audio/video devices 182 that reproduce the sound recordings for system subscribers. *Id.* at 4:18–30. Audio/video receivers 180 may be, e.g.,

set-top boxes, and audio/video devices 182 may be, e.g., televisions. *Id.* at 4:30–32.

Video subsystem 104 generates a data packet for the channel over which the sound recording is broadcast upon receiving a trigger from audio subsystem 102. Ex. 1001, 4:33–35, 6:28–33. The trigger identifies the sound recording, information about the sound recording, and the channel broadcasting the sound recording. *Id.* at 6:28–33. The generated data packet contains a video image specification that specifies a visual complement to the audio broadcast. *Id.* at 4:35–39. The video image specification includes one or more visual media asset identifiers, where visual media assets can be graphic images, videos, text messages, and other media assets. *Id.* at 4:41–48. For example, the video image specification may include the name of the song, artist, and album associated with the song broadcast by transmission system 170. *Id.* at 4:50–63. The video image specification “*may* also specify the screen position where each identified asset is to be displayed” on a subscriber’s screen. *Id.* at 4:43–45 (emphasis added). The data packet containing the video image specification can contain an XML or HTML file. *Id.* at 5:28–36. Once generated, the data packet is transmitted from video subsystem 104 to transmission system 170. *Id.* at 5:37–44.

Transmission system 170 parses the data packet received from video subsystem 104, and using the information contained in the video image specification, generates and transmits a video image to audio/video receivers 180. *Id.* at 5:60–67. The video image is then sent to and displayed by audio/video devices 182. *Id.* at 6:1–3. To generate the video image from the video image specification, transmission system 170 preferably has access to storage unit 185 containing those visual media assets identified by visual

media asset identifier in the video image specification. *Id.* at 5:45–53. Alternatively, the visual media assets can be stored in storage unit 186 of video subsystem 104, and video subsystem 104 can transmit the visual media assets to transmission system 170. *Id.* at 5:54–59.

The video image generated by transmission system 170 can include a user selectable “buy” button. Ex. 1001, 7:31–37. A user, selecting the “buy” button, can initiate an e-commerce transaction with transaction processing system 106. *Id.* at 7:61–64. The selection causes a message to be sent from the user’s audio/video receiver 180 to transaction processing system 106 containing an identifier of the product (e.g., song, album) the user wants to purchase. *Id.* at 8:7–12.

Claims 1 and 8, which are the independent claims among the challenged claims, recite:

1. A method for providing a visual complement to an audio stream, comprising:
  - [a] transmitting, from a first transmission system to a second transmission system, audio data corresponding to a sound recording; and
  - [b] transmitting a data packet comprising a video image specification while the audio data is being transmitted,
  - [c-1] wherein the video image specification specifies one or more media asset identifiers, each of which identifies one or more media assets, one or more of said media asset identifiers identifying a media asset associated with the sound recording,
  - [c-2] said data packet further comprising sound recording information associated with the sound recording, the sound recording information comprising one or more of the title of the sound recording and the name of the artist who recorded the sound recording,

[d-1] wherein the step of transmitting the data packet comprises transmitting the data packet to a system comprising a video image generator,

[d-2] wherein the video image generator is configured to generate a video image using the video image specification and

[d-3] the system is configured to provide the generated video image to a device that is operable to display the video image to a user of the device, and

[d-4] wherein the video image generator is configured to generate the video image by retrieving the media assets identified in the video image specification.

*Id.* at 15:60–16:20 (with the parties’ labeling indicated within square brackets and line breaks added to ease readability).

8. A system for providing a visual complement to an audio service, the system comprising:

[a] an audio subsystem configured to store a playlist for an audio channel of the audio service; and

[b] a first transmission system configured to transmit to a second transmission system audio data corresponding to a sound recording specified in the playlist; and

[c-1] a video image generator configured to:

i) receive, while the sound recording is being transmitted, a video image specification that specifies one or more media asset identifiers that identify one or more media assets, the one or more media assets being associated with the sound recording that is being transmitted, and

[c-2] sound recording information associated with the sound recording, the sound recording information comprising one or more of the title of the sound recording and the name of the artist who recorded the sound recording, and

- [c-3] ii) generate a video image using the media assets identified in the video image specification, wherein the first transmission system is further configured to transmit to the second transmission system the generated video image multiplexed with the audio data corresponding to the sound recording,
- [d] wherein the system further comprises a video subsystem,
  - [d-1] the audio subsystem is configured to i) retrieve the audio data corresponding to the sound recording prior to the first transmission system transmitting said audio data and
  - [d-2] ii) provide to the video subsystem a trigger message comprising an identifier associated with said sound recording.

*Id.* at 16:49–17:11 (with the parties’ labeling indicated within square brackets and line breaks added to ease readability).

## II. ANALYSIS

### A. 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, 2144–46 (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. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we give claim terms their ordinary and customary meaning. *See 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.”). Only terms which are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner contends that all claim terms, except for the term “video image specification,” should be given their plain and ordinary meaning, and except as explained below, does not expressly construe any claim term.

Pet. 8. Patent Owner argues the term “video image specification” does not require construction, and does not expressly construe any claim term.

Prelim. Resp. 10–11.

Petitioner argues that “video image specification” means “data that specifies at least one visual media asset identifier.” *Id.* (citing Ex. 1001, 4:33–49). Petitioner argues the Specification discloses a “video image specification” may, but need not, specify the screen position where a video media asset is displayed. *Id.* Patent Owner argues this term requires no construction. Based on the portion of the Specification cited by Petitioner, we agree that “video image specification” means “data that specifies at least one visual media asset identifier.”

#### B. THE CHALLENGES TO THE CLAIMS

Petitioner challenges the patentability of the challenged claims on the grounds that the claims are either anticipated by Mackintosh or obvious in view of the combination of Mackintosh and Hallier. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398

(2007), reaffirmed the framework for determining obviousness as 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. With these standards in mind, we address each challenge below.

*1. Claims 1–7: Anticipation by Mackintosh*

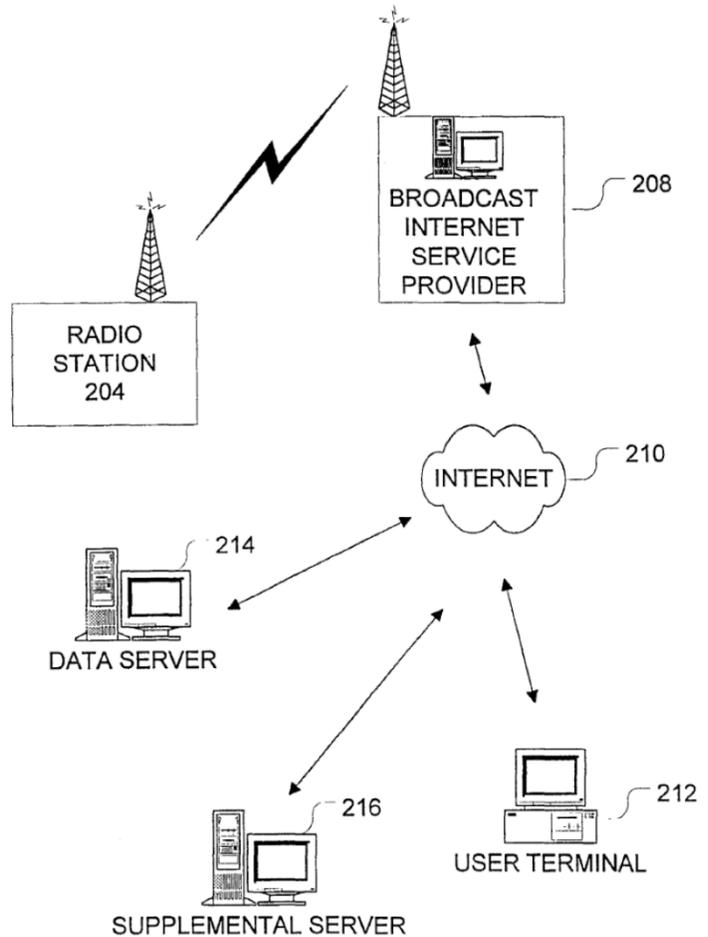
Petitioner contends that Mackintosh anticipates claims 1–7. Pet. 9–44. For the reasons stated below, we determine that Petitioner has demonstrated a reasonable likelihood that it will establish that Mackintosh anticipates claim 1, and we exercise discretion to institute *inter partes* review on Petitioner’s challenge to dependent claims 2–7.

a) Overview of Mackintosh

Mackintosh discloses “systems and methods for providing enhanced features for the delivery of broadcast material to a listener, viewer or, more generally, a user.” Ex. 1004, 3:6–8. Mackintosh provides supplemental materials to the user “in a coordinated fashion such that they relate to the actual broadcast materials . . . being streamed or otherwise delivered to the user.” *Id.* at 3:10–12. Supplemental materials can include “images, video clips, audio clips, data, or other materials that may be provided to the user in conjunction with the broadcast materials.” *Id.* at 3:18–20. For example, Mackintosh discloses “the broadcast of radio broadcast materials over the

Internet,” such as the broadcast of “a plurality of tracks that can be streamed to a user via the Internet.” *Id.* at 3:24–27. The tracks (e.g., music tracks or songs) can be “provided along with program data that can indicate, for example, an identification of the track, the type of track, and other pertinent or relevant information regarding the particular track.” *Id.* at 3:27–32.

Figure 5, reproduced at right, is a block diagram showing radio station 204 providing a broadcast to user terminal 212 via Internet Service Provider (“ISP”) 208. Ex. 1004, 5:20–22. Radio station 204 broadcasts material to ISP 208, which then provides the broadcast material to user terminals 212 via the Internet. *Id.* at 10:31–32, 12:13–14. The broadcast can be provided in AM, FM, or digital format, and can consist of pre-programmed broadcast material. *Id.* at 11:1–8. The broadcast material can include the current radio broadcast and program data associated with the current radio broadcast, such as cut codes indicating the tracks in the broadcast, advertising data, and format data indicating the type of music broadcast or the type of product advertised. *Id.* at 10:32–35, 11:28–35, 12:13–14. The format data can be used to key



**Fig. 5**

particular pieces or categories of supplemental material to the current broadcast. *Id.* at 12:1–2. User terminal 212, which can be any general purpose audio/video player capable of playing the broadcast material and the supplemental material, plays the broadcast material to a user. *Id.* at 12:21–26.

ISP 208 provides program data associated with the broadcast, including a cut number and category, to either data server 214 or user terminal 212. *Id.* at 12:17–20. When provided to user terminal 212, user terminal 212 provides the program data to data server 214. *Id.* at 12:29–33. Data server 214 uses the program data to retrieve supplemental materials such as images, videos, audios, or text that is associated with the program data, or to retrieve URLs or other location information identifying the location of supplemental materials on supplemental servers 216. *Id.* at 13:10–16. Data server 214 then returns the supplemental materials or location information for the supplemental materials to user terminal 212. *Id.* at 13:16–21. User terminal 212 receives the supplemental materials, or uses the location information to retrieve the supplemental materials from supplemental servers 216, and “plays” or displays them to the user while the user listens to the broadcast material. *Id.* at 13:22–29. This allows the system to provide the user with, e.g., a track number, artist, album title, album image, links to purchase the album, promotional materials, concert schedules, other images or videos relating to the album or artist, or virtually any other information related to the current track broadcasted by radio station 204. *Id.* at 13:34–14:5.

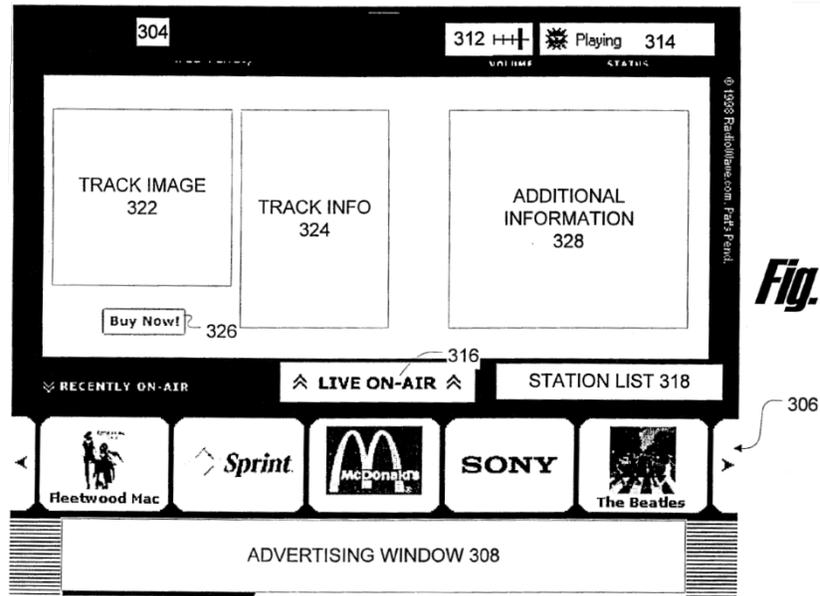
The supplemental material provided to user terminal 212 can be displayed or “played” on a multimedia player such as that shown in Figure 7, which is reproduced below right. The user interface includes data

window 302, player interface 304, history window 306, and advertising window 308. *Id.* at 15:34–36.

Player interface 304 includes user selectable controls such as volume control 312, status display 314, on-air

display 316, and station list 318. *Id.* at 16:1–5. Data window 302 includes areas to display track image 322, track information 324, buy now button 326, and additional information selection area 328. *Id.* at 16:11–15.

When “user terminal 212 is provided with URL’s to retrieve supplemental materials, the URL’s can be used to retrieve some or all of the information provided” in data window 302. *Id.* at 16:17–19. Track image 322 can be an album image, i.e., a picture, image, or graphical representation of the album containing the current song being played. *Id.* at 16:22–24. Track information 324 can display the artist’s name, the current song being played, the album on which that song can be found, and any other information related to the current song. *Id.* at 16:35–17:3. User terminal 212 can retrieve and display the track/album image 322 and track



information 324 automatically upon receipt without user interaction. *Id.* at 17:8–10.

Additional information selection area 328 can provide menus or icons the user can interact with to obtain additional information or supplemental materials regarding the currently playing track, such as concert schedules, tickets, merchandizing or other information. *Id.* at 17:13–20. This information is generally not retrieved by user terminal 212 until it requested by clicking on an icon or otherwise interacting with the menu provided in additional information selection area 328. *Id.* at 17:24–27.

b) Independent Claim 1

Claim 1 recites a “method for providing a visual complement to an audio stream,” and requires a first transmission system transmitting audio data corresponding to a sound recording to a second transmission system. Ex. 1001, 15:60–64.

Petitioner demonstrates a reasonable likelihood of establishing that Mackintosh discloses this limitation. Pet. 14–16 (citing Ex. 1004, 3:24–29, 10:26–11:2, 12:13–18, Fig. 5). In particular, Petitioner identifies Mackintosh’s radio station 204 as the first transmission system, ISP 208 as the second transmission system, and demonstrates radio station 204 transmits audio data to ISP 208. *Id.* Mackintosh discloses radio station 204 broadcasts “a predetermined audio stream comprising a predetermined sequence of songs.” Ex. 1004, 26:25–28. Patent Owner does not contest Mackintosh discloses this limitation. *See* Prelim. Resp.

Claim 1 further requires transmitting a data packet that is generated from the selected song’s identifier, and that includes a media asset identifier

and sound recording information, including the selected song's title and recording artist. Ex. 1001, 16:1–7.

Petitioner argues this transmitting step does not require use of the first or second transmission systems otherwise required by claim 1. Pet. 16. Petitioner contends that Mackintosh's data server 214 performs this step by transmitting a data packet containing supplemental materials to user terminal 212. *Id.* (citing Ex. 1004, 13:16–18, 14:30–32, Fig. 5). Petitioner further contends that the transmitted data packet includes both a media asset identifier (e.g., a URL pointing to images, videos, audio, text, or other information based on the program data associated with the current song), and sound recording information such as the name of the song and the recording artist. *Id.* at 23–27 (citing Ex. 1004, 3:29–34, 10:7–14, 10:31–35, 13:10–18, 13:24–14:5, 16:11–21, 16:35–17:3, 28:3–26, Fig. 7; Ex. 1003 ¶ 45).

Patent Owner argues that Petitioner has failed to demonstrate that Mackintosh's data server 214 generates and transmits a data packet that includes both a video image specification including a media asset identifier and sound recording information comprising one or more of the song title and artist. Prelim. Resp. 13–18. In particular, Patent Owner contends that Mackintosh discloses alternative embodiments in which the data packet transmitted from data server 214 to user terminal 212 contains either supplemental materials, or location information (e.g., URLs) by which user terminal 212 can obtain supplemental materials. *Id.* at 16–17 (citing Ex. 1004, 4:7–11, 8:14–9:8).<sup>1</sup> Patent Owner argues that the portions of

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<sup>1</sup> Patent Owner's citation is in the form X(Y):a–b, where X is the page number of Ex. 1004 appearing at the bottom of the page, and Y is the page

Mackintosh cited by Petitioner fail to disclose a single embodiment in which the transmitted data packet includes both the supplemental material itself (e.g., sound recording information) and URLs to the supplemental material (e.g., a video image specification including media asset identifiers). *Id.* at 17–18 (citing Ex. 1004, 10:7–14, 13:10–18). Therefore, because anticipation can't be shown by combining different embodiments of a reference, Patent Owner argues Petitioner has failed to show Mackintosh anticipates claim 1. *Id.* at 18–19.

At this stage of the proceeding, we are not persuaded by Patent Owner's arguments. Petitioner cites to, among others, Mackintosh's disclosures on page 16, lines 11–21, and page 28, lines 3–26. Pet. 21–25. Mackintosh discloses that when user terminal 212 is provided with URL's to retrieve supplemental materials, "the URL's can be used to retrieve *some or all* of the information provided in . . . data window 302." Ex. 1004, 16:17–19 (emphasis added). This suggests that not all of the information displayed in data window 302 is retrieved via URL. Mackintosh further discloses when a data server receives the cut code (song identifier) of the currently broadcasted song, it can use the cut code to retrieve (1) the name of an image containing the album cover for the song, (2) a link to additional information related to the song, (3) the name of the artist, (4) the name of the album, and (5) the name of the song. *Id.* at 28:3–18. The data server then either obtains the album cover image and sends the media player the album cover image, song name, artist name, and album name, or sends the media

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number of the published Mackintosh application appearing at the top of the page. For simplicity, we cite only to the page number of the published Mackintosh application.

player the link to the album cover image, which the media player uses to obtain the album cover image. *Id.* at 28:20–26. This again, suggests the data packet sent by the data server to the media player contains some of the information displayed in data window 302 (e.g., album, artist, and song name), and a link allowing the media player to obtain additional information such as the album cover image. For example, Mackintosh discloses “[r]esponsive to the receipt of the artist name, album name, song name, image, and provider link . . . [this information is] provided to the player 510.” *Id.* at 28:33–35.

Accordingly, at this stage of the proceeding, having considered Petitioner’s and Patent Owner’s arguments and evidence, both for and against, we find Petitioner has demonstrated a reasonable likelihood of establishing that Mackintosh discloses transmitting a data packet that includes a video image specification including a media asset identifier and sound recording information, including one or more of title and artist as required by claim 1.

Patent Owner has not argued that Petitioner has failed to demonstrate a reasonable likelihood of establishing the Mackintosh describes the remaining limitations of claim 1. Based on our review of Petitioner’s argument and evidence, we determine that Petitioner has demonstrated a reasonable likelihood of establishing that Mackintosh describes those limitations. Accordingly, we determine that *inter partes* review of claim 1 is warranted.

c) Dependent Claims 2–7

Claims 2–7 depend ultimately from claim 1. Ex. 1001, 16:21–48. Regarding these dependent claims, Patent Owner proffers argument only for

claim 7. Prelim. Resp. 19–22. We exercise our discretion under 37 C.F.R. § 42.108 and also institute *inter partes* review of these dependent claims for this challenge. By exercising our discretion in this regard, we seek to achieve a final resolution of the dispute between the parties at the Board. *See Intex Recreation Corp. v. Bestway Inflatables & Material Corp.*, Case No. IPR2016-00180, 2016 WL 8377184, at \*3–5 (PTAB Jun. 6, 2016) (exercising discretion to institute on all challenged claims after determining reasonable likelihood that at least one claim is unpatentable). We note, however, that the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

d) Conclusion

Based on our review of the current record, we institute *inter partes* review to determine whether Mackintosh anticipates claims 1–7.

2. *Claims 8–11: Obviousness in View of Mackintosh and Hallier*

Petitioner contends that the combination of Mackintosh and Hallier renders claims 8–11 unpatentable as obvious. Pet. 44–60. For the reasons stated below, we determine that Petitioner has demonstrated a reasonable likelihood that it will establish that the combination of Mackintosh and Hallier renders claims 8–11 unpatentable as obvious.

a) Overview of Hallier

Hallier is a paper describing a digital audio broadcasting (“DAB”) system. Ex. 1005, Abstract. The DAB system simultaneously delivers

audio, image, video, and other data content multiplexed into a single data stream of up to 1.728 Mbit/s bandwidth. *Id.* at 794.<sup>2</sup>

b) Independent Claim 8

Petitioner identifies in detail the portions of Mackintosh and Hallier that describe each limitation of independent claim 8. Pet. 48–58 (citing Ex. 1004, 3:5–5:5, 10:31–35, 11:7–16, 13:13–16, 13:24–14:5, 15:6–10, 16:35–17:3, 26:25–27:23, Figures 1, 7, 12; Ex. 1005, 794). Petitioner also supports its contentions with expert testimony from Dr. Shamos. *Id.* (citing Ex. 1003 ¶¶ 74–76, 80–85). Petitioner relies on Mackintosh as describing every element of claim 8 except for the requirement that “the first transmission system is further configured to transmit to the second transmission system the generated video image multiplexed with the audio data corresponding to the sound recording” as recited in the limitation referenced as 8c-3. *Id.* at 46, 53–54. Petitioner relies upon Hallier as describing multiplexing data including video data into a broadcast audio stream. *Id.* at 44–46. Petitioner also contends that an ordinarily skilled artisan would have found it obvious to modify Mackintosh to incorporate Hallier’s multiplexing method to avoid load-related problems that Mackintosh recognized in connection with its data server 214. *Id.* at 46–48. Petitioner also contends that Mackintosh suggests such multiplexing of audio and video when it illustrates direct communication from program provider 104 and data server 116. *Id.* at 47. Petitioner supports its contentions regarding what an ordinarily skilled artisan would have been

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<sup>2</sup> Citations to Exhibit 1005 refer to Hallier’s original page numbering.

motivated to incorporate from Hallier into Mackintosh with testimony from Dr. Shamos. *Id.* at 46–48 (citing Ex. 1003 ¶¶ 63–68).

Patent Owner argues that we should not institute *inter partes* review of claims 8–11 because Petitioner has not established that the combination of Mackintosh and Hallier describes “a video image generator configured to . . . ii) generate a video image using the media assets identified in the video image specification” as recited in claim 8. Prelim. Resp. 22–23. Patent Owner’s argument is not persuasive.

Petitioner identifies data server 214 as the “video image generator” recited in claim 8. Petitioner contends that implementing a “video image generator” on data server 214 is suggested by Figure 1, which illustrates direct communication between program provider 104 and data server 116. Pet. 50. Mackintosh’s Figures 1 and 2 and accompanying text describe a system in which program provider 104 sends audio and related identifying data to data server 116, which then retrieves supplemental information, which may include video, and delivers one broadcast to clients 112. Mackintosh states: “In a step 138, data server 116 provides the retrieved supplemental materials to user equipment 112 such that they can be played, displayed, or otherwise provided to the user in coordination with the broadcast materials.” Ex. 1004, 8:21–23. Similarly, Mackintosh expressly suggests that data server 214 is also capable of retrieving supplemental materials and sending those materials, including video images, directly to user terminal 212. *Id.* at 13:19–21; *see also id.* at 13:12–13 (“supplemental materials can include, for example, images, videos, audios, text, or other data”).

Patent Owner never provides an express interpretation of “generate a video image,” but appears to imply that “generat[ing] a video image” refers to creating a file that represents a video image.<sup>3</sup> The Specification of the ’602 patent broadly describes its video image generator as a component that “generates a video image based on the provided video image specification and transmits the video image to a first transmission subsystem.” Ex. 1001, 2:10–13. The video image specification “specifies one or more visual media asset identifiers, each of which identif[ies] one or more visual media assets.” *Id.* at 4:41–43. The visual media assets can be “graphic image files (e.g., GIF files, JPEG files, bitmap files, etc.), video files (e.g., MPEG files, AVI files), text messages, etc.” *Id.* at 4:45–48. The Specification refers to “video images” as being pre-generated, and capable of being “stored at the audio/video system or at the transmission system.” *Id.* at 2:34–35. The Specification also refers to the “video image” as data that is capable of being transmitted with other data in an MPEG-2 data stream. *Id.* at 10:44–46. In view of these descriptions of “video image,” we understand “generat[ing] a video image” to refer to creating a set of image data that can be stored, transmitted, received, and decoded to render a video image on a display device, including video and still images.

Based on the current record, and for the reasons stated above, we are persuaded that Petitioner has demonstrated a reasonable likelihood of establishing the combination of Mackintosh and Hallier renders claim 8 unpatentable as obvious.

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<sup>3</sup> The ’602 patent describes such files as “media assets” that include “graphic image files (e.g., GIF files, JPEG files, bitmap files, etc.), video files (e.g., MPEG files, AVI files), text messages, etc.” Ex. 1001, 4:45–48.

c) Dependent Claims 9–11

Claims 9–11 depend ultimately from claim 1. Ex. 1001, 17:11–23. Regarding these dependent claims, Patent Owner proffers argument only for claim 11. Prelim. Resp. 25–26. For the reasons expressed in Part II.B.1.c) above, we exercise our discretion under 37 C.F.R. § 42.108 and institute *inter partes* review of these dependent claims for this challenge. We note, however, that the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378.

d) Conclusion

Based on our review of the current record, we conclude that Petitioner has demonstrated a reasonable likelihood of establishing that the combination of Mackintosh and Hallier renders claims 8–11 of the '602 patent unpatentable as obvious. Accordingly, we institute *inter partes* review of this challenge.

### III. CONCLUSION

For the reasons expressed above, we determine that Petitioner has demonstrated a reasonable likelihood of showing that the challenged claims are unpatentable on all alleged grounds of unpatentability. This Decision does not reflect a final determination on the patentability of any claim.

### IV. ORDER

For the reasons given, it is:

ORDERED that *inter partes* review is instituted of claims 1–11 of the '602 patent with respect to the following grounds of unpatentability:

- (1) Mackintosh anticipates claims 1–7 under 35 U.S.C. § 102(b); and
- (2) the combination of Mackintosh and Hallier renders claims 8–11 unpatentable as obvious under 35 U.S.C. § 103; and

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FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '602 patent is instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is given of the institution of a trial.

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