

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC, DELL INC. and
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

CYPRESS LAKE SOFTWARE, INC.,
Patent Owner.

IPR2019-00391
Patent 9,817,558 B1

Before KEN B. BARRETT, MIRIAM L. QUINN, and
GREGG I. ANDERSON, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Summary*

Google LLC, Dell Inc. and Samsung Electronics America, Inc. (collectively “Petitioner”)¹ filed a Petition requesting *inter partes* review of U.S. Patent No. 9,817,558 B1 (“the ’558 patent,” Ex. 1001). Paper 1 (“Pet.”). The Petition challenges the patentability of claims 14–22, 24–28, and 30 of the ’558 patent. *Id.* at 8. We instituted an *inter partes* review of all challenged claims on the sole proposed ground of unpatentability. Paper 8 (“Dec. to Inst.”), 24. Cypress Lake Software, Inc. (“Patent Owner”)² filed a Response to the Petition. Paper 10 (“PO Resp.”). Petitioner filed a Reply (Paper 12, “Pet. Reply”) and Patent Owner filed a Sur-Reply (Paper 13, “PO Sur-Reply”). An oral argument was not held. *See* Paper 17 (granting Petitioner’s unopposed request to cancel the oral argument).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that claims 14–22, 24–28, and 30 of the ’558 patent are unpatentable.

B. *Related Proceedings*

One or both parties identify, as matters involving or related to the ’558 patent, Patent Trial and Appeal Board case IPR2019-00390 and the following:

¹ Petitioner identifies Google LLC, Dell Inc., Dell Technologies Inc., Denali Intermediate Inc., Dell USA LP, Dell Products LP, EMC Corporation, Samsung Electronics America, Inc., Samsung Electronics Corp, Ltd. and HP Inc. as real parties-in-interest. Pet. 6.

² Patent Owner identifies Cypress Lake Software, Inc. as the real party-in-interest. Paper 7, 1.

LG Electronics MobileComm USA, Inc. v. Cypress Lake Software, Inc., Case No. 1-18-cv-00806 (D. Del.);

Cypress Lake Software, Inc. v. Dell, Inc., Case No. 6-18-cv-00138 (E.D. Tex.);

Cypress Lake Software, Inc. v. Samsung Electronics America, Inc., Case No. 6-18-cv-00030 (E.D. Tex.);

Cypress Lake Software, Inc. v. Samsung C&T America, Inc., Case No. 6-18-cv-00016 (E.D. Tex.);

Cypress Lake Software, Inc. v. BlackBerry Corporation, Case No. 6-17-cv-00692 (E.D. Tex.);

Cypress Lake Software, Inc. v. HP Inc., Case No. 6-17-cv-00462 (E.D. Tex.);

Cypress Lake Software, Inc. v. LG Electronics USA, Inc., Case No. 1-17-cv-01133 (D. Del.);

Cypress Lake Software, Inc. v. ZTE (USA) Inc., Case No. 6-17-cv-00300 (E.D. Tex.);

Cypress Lake Software, Inc. v. HP Inc., Case No. 5:18-cv-06144 (N.D. Cal.) (according to Patent Owner, transferred from the Eastern District of Texas on 10/5/2018); and

Cypress Lake Software, Inc. v. ZTE (USA) Inc., Case No. 5:18-cv-06146 (N.D. Cal.) (according to Patent Owner, transferred from Eastern District of Texas on 10/5/2018).

Pet. 6–7; Paper 7, 2.

C. The '558 Patent

The '558 patent is titled “Methods, Systems, and Computer Program Products for Coordinating Playing of Media Streams.” Ex. 1001, code (54).

The '558 patent describes a problem of multiple media streams, such as video, being allowed to be presented on the same device thus causing undesirable interference.

When applications attempt to play more than one media stream on current devices, all the applications are allowed access to the presentation devices of the device, for example a display device and/or an audio device. The media streams are played by corresponding applications without regard for other media streams being played. Watching a video or listening to a

song with interference from other audio streams and video streams is a common experience.

Id. at 1:21–28. Thus, according to the ’558 patent, “there exists a need for methods, systems, and computer program products for coordinating playing of media streams.” *Id.* at 1:43–45. Further according to the ’558 patent, “[c]oordination and control of media streams as described herein may prevent incomprehensible and sometimes unpleasant user experiences resulting from media streams playing simultaneously in an uncoordinated manner.” *Id.* at 14:51–54.

The ’558 patent discloses the use of “presentation focus information” to coordinate the actions for the media players:

Methods and systems are described for coordinating playing of media streams. In one aspect the method includes detecting a first media player access to a first presentation device to play a first media stream. The method further includes accessing first presentation focus information for determining whether the first media player has first presentation focus for playing the first media stream.

Id. at 1:57–63. The ’558 patent explains that “presentation focus refers to an attribute associated with a media player, directly and/or indirectly, indicating whether the media player is allowed to access one or more presentation devices for playing one or more corresponding media streams on the presentation devices.” *Id.* at 9:43–48. “Presentation focus is an attribute for restricting and coordinating access to an output device by one or more applications.” *Id.* at 9:60–62. “Presentation focus information identifies and/or otherwise enables the identification of one or more media players and whether the media players have presentation focus.” *Id.* at 9:20–23.

A change in the presentation focus may result from a user input such as pressing “play.” *Id.* at 11:50–52 (“A user input for identifying a

particular media stream and/or player to play may be detected resulting in a change to presentation focus information.”). The utilization of multiple presentation devices is discussed:

In another aspect, presentation focus information may identify more than one media stream of one or more media players for playing on one or more presentation devices. That is, multiple presentation devices may play media streams at the same time and/or multiple media players may play corresponding media streams on a shared presentation device.

Id. at 9:28–34.

D. Illustrative Claim

Of the challenged claims of the ’558 patent, claims 14 and 24 are independent claims. The remaining challenged claims depend directly or indirectly from claim 14 or claim 24. Claim 14, reproduced below with bracketed annotations³ inserted, is illustrative:

14[a]. A first presentation device, comprising:
[14b] a non-transitory memory storing instructions;
[14c] a touchscreen; and
[14d] one or more processors in communication with the non-transitory memory and the touchscreen, wherein the one or more processors execute the instructions to:
[14e] simultaneously present a first media player and a second media player, [14f] where the first media player is presented with at least one first input control and the second media player is presented with at least one second input control, the at least one first input control and the at least one second input control each including at least one of a play input control or a pause input control;
[14g] detect a selection of the at least one first input control presented with the first media player;

³ We utilize Petitioner’s annotations for claim 14 for ease of reference but have retained the paragraph formatting from the issued patent.

[14h] in response to the detection of the selection of the at least one first input control presented with the first media player, present a first media stream via the first presentation device utilizing the first media player;

[14i] detect, while the first media stream is being presented via the first presentation device utilizing the first media player, a selection of the at least one second input control presented with the second media player;

[14j] in response to the detection of the selection of the at least one second input control presented with the second media player while the first media stream is being presented via the first presentation device utilizing the first media player, cause a change in presentation focus, by: [14k] pausing the presentation of the first media stream via the first presentation device utilizing the first media player, and presenting a second media stream via the first presentation device utilizing the second media player;

[14l] wherein the first presentation device is configured such that the change in presentation focus results from at least one of: a releasing of a first presentation focus in connection with the first media player, a detected user input indication for giving the second media player a second presentation focus, a change in input focus, a change in an attribute of a user interface element, a count of media streams being played, a ranking of media streams being played, a transparency level of at least one of the user interface element, or another user interface element sharing a region of a display of the first presentation device.

Ex. 1001, 33:5–51.

E. Evidence

Petitioner relies on the following references:

Reference		Dates	Exhibit No.
Marano	US Pat. Appl. Pub. No. 2010/0138780 A1	Filed May 20, 2009; Published June 3, 2010	1003
Murray	US Pat. Appl. Pub. No. 2009/0228897 A1	Filed March 4, 2009; Published Sept. 10, 2009	1006

Petitioner also relies on the Declaration of Dr. Benjamin B. Bederson (Ex. 1002) in support of its arguments. Patent Owner initially relied on the “Rebuttal Expert Report of Dr. Aviel D. Rubin” (Ex. 2002) filed in a related district court litigation. See PO Resp. 3, 9 n.17, 28 n.47. Patent Owner withdrew reliance on that testimony and, pursuant to the parties’ joint stipulation, Exhibit 2002 containing that testimony was expunged because Dr. Rubin became unavailable for cross-examination. See Paper 11 at 2. The parties rely on other exhibits as discussed below.

F. Asserted Ground of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following ground:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
14–22, 24–28, 30	103(a)	Marano, Murray

II. ANALYSIS

A. Principles of Law

Petitioner bears the burden of persuasion to prove unpatentability of the claims challenged in the Petition, and that burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must establish by a preponderance of the evidence that the challenged claims are unpatentable. 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2018).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406

(2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) any objective evidence of non-obviousness.⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. The Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (internal quotation marks and citation omitted).

Petitioner, relying on the testimony of Dr. Bederson, maintains that:

In the relevant timeframe, a person of ordinary skill in the art had at least a Bachelor’s Degree in Computer Science and two years of work experience programming personal computing systems including programming for audio-visual presentation within various computer systems.

Pet. 50 (citing Ex. 1002 ¶ 29 (the Bederson Declaration); Ex. 1013, 12 (claim construction order in a district court proceeding)).

Patent Owner notes that the ’558 patent has been the subject of two claim construction orders issued by the District Court for the Eastern District of Texas, and requests that “the Board adopt a definition of [the person of ordinary skill in the art] consistent with the District Court (and consistent with the Petitioner’s reliance on documents from such proceedings).” PO

⁴ The parties have not directed our attention to any objective evidence of non-obviousness.

Resp. 25–26 (citing Exs. 1013, 1022 (claim construction orders)). Patent Owner, however, does not explain how, if at all, Petitioner’s proposed level of ordinary skill in the art is not consistent with that of the District Court. Through added emphasis in quoting the District Court’s claim construction order, Patent Owner identifies the type of bachelor’s degree as a difference. *Id.* at 25 (quoting Ex. 1013, 12). The District Court found that a person of ordinary skill in the art would have had a “Bachelor’s degree in Electrical Engineering, Computer Engineering, Computer Science, or equivalent thereof” (Ex. 1013, 12), whereas Petitioner proposes a Bachelor’s Degree in Computer Science (Pet. 50). Although the District Court’s definition seems broader than that proposed by Petitioner, we cannot say that the two definitions are inconsistent. Patent Owner also does not explain how, if at all, Petitioner’s proposed level of ordinary skill in the art is not consistent with Petitioner’s (or Patent Owner’s) reliance here on documents from those proceedings. *See* PO Resp. 26 (citing Exs. 1010, 1013–1022); *cf.*, *e.g.*, Pet. 17 (citing Exs. 1010, 1013–1020 in the context of informing the Board that “[v]arious parties have taken positions concerning claim construction in related litigation.”); Paper 11 at 2 (Patent Owner withdrawing reliance on Dr. Ruben’s testimony from a district court proceeding).

We determine that the definition offered by Petitioner and Dr. Bederson comports with the qualifications a person would have needed to understand and implement the teachings of the ’558 patent and the prior art of record. *Cf. Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (recognizing that the prior art itself may reflect an appropriate level of skill in the art). Moreover, the parties do not identify, and we not discern, any difference between the two proposed definitions that has a material

effect on any dispositive issue in this case. Because Petitioner’s and Dr. Bederson’s definition reflects the level of ordinary skill in the art, we adopt and apply it here.

C. Claim Construction

In an *inter partes* review requested in a petition filed on or after November 13, 2018, we apply the same claim construction standard used in district courts, namely that articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). See 37 C.F.R. § 42.100(b) (2019).

In applying that standard, claim terms generally are given their ordinary and customary meaning as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

The ’558 patent has been the subject of two claim construction orders issued by the District Court for the Eastern District of Texas—in *Cypress Lake Software, Inc. v. ZTE (USA) Inc.*, Case No. 6-17-cv-00300 (E.D. Tex.) (Ex. 1013, “the *ZTE* Claim Construction Order,” signed August 23, 2018) and in *Cypress Lake Software, Inc. v. Samsung Electronics America, Inc.*, Case No. 6-18-cv-00030 (E.D. Tex.) (Ex. 1022, “the *Samsung* Claim Construction Order,” signed May 10, 2019).⁵

⁵ In the related case IPR2019-00390, the parties each filed a brief addressing the possible impact on that *inter partes* review of the then-recently issued

1. *Presentation Focus and Presentation Focus Information*

The parties to the *ZTE* litigation (Patent Owner Cypress Lake and defendant HP Inc.) agreed to the following proposed constructions of “presentation focus” and “presentation focus information” within the meaning of claim 14 of the ’558 patent:

[P]resentation focus [refers to] an attribute associated with a media player, directly and/or indirectly, indicating whether the media player is allowed to access one or more presentation devices for playing one or more corresponding media streams on the presentation devices; an attribute for restricting and coordinating access to an output device by one or more applications [; and]

[P]resentation focus information [refers to] data that identifies one or more media players and whether the media players have presentation focus.

Ex. 1013, 12; *see also* Ex. 1010, 2 (Joint Claim Construction Statement, “Cypress and HP have agreed on the following constructions”). The *ZTE* District Court adopted those agreed-upon constructions. Ex. 1013, 13. The parties to the *Samsung* litigation also agreed to the same or similar construction for “presentation focus” within the meaning of claims 14 and 17, and the District Court adopted that agreed-upon construction. Ex. 1022, 13, 15.

Petitioner, in the Petition, argues that the agreed constructions in the *ZTE* Claim Construction Order are supported by the Specification and that they should be adopted here. Pet. 17–18 (citing Ex. 1001, 9:15–25; Ex. 1002 ¶¶ 50–51). In the Institution Decision, we determined that

claim construction order in the District Court, and particularly regarding a recitation of independent claim 1. IPR2019-00390, Papers 10, 11. The parties did not request similar briefing in this *inter partes* review involving independent claims 14 and 24.

Petitioner’s proposed constructions are consistent with descriptions in the Specification and are applicable to independent claims 14 and 24 and their respective dependent claims. Dec. to Inst. 9–10 (citing Ex. 1001, 9:20–23, 9:43–48, 9:60–62). We adopted those constructions for purposes of the Institution Decision. *Id.* at 10. In its Response, Patent Owner states that it does not dispute the adopted constructions. PO Resp. 27. For purposes of this decision, we again adopt the constructions for “presentation focus” and “presentation focus information” as set forth above.

2. *Instructions To . . .*

Independent claims 14 and 24 recite “wherein the one or more processors execute the instructions to . . .” followed by a list of actions.

In the *ZTE* Claim Construction Order, the District Court determined that the “instructions to” recitations of claim 14 of the ’558 patent are *not* governed by 35 U.S.C. § 112 ¶ 6 and are to be given their plain and ordinary meaning. Ex. 1013, 66–67. Petitioner states:

For the limited purpose of the present petition, the Petitioners apply the court’s interpretation in *ZTE* that claim terms of the form “instructions to . . . [perform a function]” are not governed by 35 U.S.C. § 112 ¶ 6 Petitioners apply the art to the challenged claims in this petition in a manner that is generally consistent with how Cypress Lake appears to be asserting the “instructions to” limitations of the ’558 patent in the related district court litigations.

Pet. 18–19 (bracketed alteration in original). In light of the Court’s interpretation as set out in the *ZTE* Claim Construction Order, we understand the Petition to apply the “plain and ordinary meaning” of “instructions to” in the articulation of its challenges.

In the Institution Decision, we observed that there was no dispute between the parties as to the “instructions to” limitations being properly

construed as having the plain and ordinary meaning, and we determined that the limitations did not require express or further construction for purposes of that decision. Dec. to Inst. 10–11.

There continues to be no dispute between the parties regarding the meaning of the “instructions to . . .” phrase. *See, e.g.*, PO Resp. 27 (claim construction section indicating that Patent Owner does not dispute the “proposed and adopted constructions”). Additionally, we discern no dispositive issue that turns on the meaning of that phrase. For these reasons, we again determine that the “instructions to . . .” phrase does not require express construction.

3. *Media Stream*

Independent claim 24, for example, recites “instructions to . . . allow *the first media stream* to be presented via the first presentation device.” Ex. 1001, 35:43–45 (emphasis added). Claim 24 contains a similar recitation where the second presentation device is to be utilized. *Id.* at 35:49–51. Independent claim 14 recites “instructions to . . . present *a first media stream* via the first presentation device . . . and presenting *a second media stream* via the first presentation device.” *Id.* at 33:23–24, 33:37–38 (emphasis added).

Patent Owner argues that “a ‘media stream,’ in the context claimed[,] . . . inherently includes an audio component.” PO Sur-Reply 4. Patent Owner further argues that “even if the claims of the ‘558 patent do not explicitly require audio and video to be played, the claims require the system to include the ability to play audio and/or^[6] video.” *Id.* at 10. Patent

⁶ Although Patent Owner uses the phrase “and/or,” we understand Patent Owner to intend only “and” based on Patent Owner’s arguments as to that

Owner implicitly argues that the claims, via the recitation of “media stream,” require the “handling of audio output” and displaying *multimedia* streams. *See id.* at 19 (“Marano does not disclose handling of audio output, in the context claimed. Specifically, Marano fails to disclose Patent Owner’s claimed technique wherein [sic] ‘allow the first media stream to be presented via the second presentation device,’ in the context claimed in claim 24.”); *id.* at 11 (section heading, with bolding omitted: “Marano is directed . . . not towards displaying multimedia streams.”); *see also* PO Resp. 38 (arguing that the relied-upon references do not “teach handling of audio output data associated with multiple resources.”).

Petitioner argues that the claims do not require audio. Pet. Reply 3–6. Petitioner contends that the claim term “media stream” encompasses “video ‘and/or’ audio (one or the other, or both).” *Id.* at 3–4 (bolding and footnote omitted) (quoting Ex. 1001, 18:52–57). Petitioner argues that “[t]he silence of the ’558 patent claims concerning *audio* contrasts sharply with their *express recitation of video*.” *Id.* at 4 (quoting claims 1 and 24).

For the reasons that follow, we conclude that the claim term “media stream” does not require audio or, as Patent Owner urges, the handling of audio output or the displaying of *multimedia* streams.

Turning first to the claim language itself, we observe that the independent claims of the ’558 patent do not include the term “audio.” Ex. 1001, 28:65–29:35, 33:5–51, 35:18–67 (independent claims 1, 14, and 24); *cf.* PO Sur-Reply 4 (Patent Owner arguing that “an audio

which Marano purportedly lacks. *See, e.g.,* PO Sur-Reply 11 (heading, with emphasis and capitalizing omitted, “Marano does not disclose handling of audio, in the context claimed.”).

component” is inherent in the claim term “media stream.”). The lack of an explicit mention of “audio” in the independent claims is in contrast to the language in, for example, independent claim 1 reciting “a first media stream that includes video.” Ex. 1001, 29:13–14; *see also id.* at 35:38–39 (independent claim 24 reciting the same). As discussed below, the Specification of the ’558 patent evidences that video and audio are types of “media.” The drafter’s use of the broader term “media stream” coupled with the explicit reference to a media stream that includes video supports a conclusion that the independent claims do not, as Patent Owner urges, require a media stream that includes audio.

As Petitioner notes (Pet. Reply 3), the concept of audio, although not recited in the independent claims, does appear in dependent claim 7, which sets a maximum limit (but not a minimum) on the number of “audible video streams” presented on a given presentation device. *See* Ex. 1001, 31:21–27 (“[T]he first presentation device is configured such that no more than a single audible video stream is presented via [each of two presentation devices] at a time, in order to avoid an unpleasant listening experience.”). Claim 7 evidences that the drafter knew how to include language directed to audio when intended.

The Specification of the ’558 patent indicates that the term “media stream” is a genus encompassing the species “audio streams” and “video streams.” For example, the background section, in describing the problem addressed, explains:

When applications attempt to play more than one media stream on current devices, all the applications are allowed access to the presentation devices of the device, for example a display device and/or an audio device. The media streams are played by corresponding applications without regard for other

media streams being played. Watching a video or listening to a song with interference from other audio streams and video streams is a common experience.

Ex. 1001, 1:21–28. In other words, a video stream (“[w]atching a video”) is a type of “media stream,” and an audio stream (“listening to a song”) is another type of “media stream.” The drafter, in the quoted excerpt above, like others in the Specification, used the phrase “and/or” to broadly disclose the subject matter and thereby encompass one or the other or both of a particular item. *Id.* at 1:21–24 (“attempt[ing] to play more than one media stream on . . . a display device and/or an audio device.”); 10:19–23 (“Priority may be based on a content type of a media stream; a source of the stream, and/or a time a media stream and/or media player has been waiting for presentation focus. The list provided is exemplary and not exhaustive.”); 18:50–57 (“Applications 404a in FIG. 4a are illustrated including media player user interface element handlers (UIEH) 432a configured to interoperate with GUI [graphical user interface] subsystem 420a and/or audio subsystem 428a to present *one or more video and/or audio streams on display 130 and/or an audio presentation device (not shown).*”) (emphasis added).

The Specification further explains that “types of media streams” include visual, audio, tactile, and odors, and states that “[c]orrespondingly, exemplary media streams include a video or image data stream, an audio stream, and a stream of other presentable sensory data.” *Id.* at 6:46–59; *cf. id.* at 6:64–66 (“An audio player, video player, and/or or other media player type may process and play audio data, video data, and/or other media data, respectively”). Thus, although an audio stream is a type of media stream, a media stream does not necessary include audio.

Patent Owner refers to the Specification and presents several arguments in support of its position, with many utilizing qualified, exemplary, and permissive, rather than mandatory, terminology. Patent Owner makes the non-controversial assertion that “[a] media player *may* be a multimedia player configured to play multiple media streams concurrently,” but this does not help Patent Owner as the pertinent claim term is “media player,” not “*multimedia* player.” PO Sur-Reply 8–10 (emphasis added). Patent Owner argues that “**ALL** of the exemplary file formats for the media players in both the ‘558 Patent and Marano list formats that are either audio . . . or audio/video,” but presents no persuasive argument or evidence from which to conclude that the claimed invention is limited to a device utilizing those exemplary formats. *Id.* at 9 (emphasis in original); *cf. id.* at 10 (seemingly contradictorily arguing that “Marano fails to disclose or enable presentation of a ‘media stream,’ in the context claimed.”). Patent Owner further argues that “the ‘558 patent teaches that ‘[c]ontainers for video formats *often* are defined to include audio and other types of data streams’ . . . [and t]hus, even if the claims of the ‘558 patent do not explicitly require audio and video to be played, the claims require the system to include the ability to play audio and/or video.” *Id.* at 10 (quoting Ex. 1001, 7:7–8) (emphasis added). Patent Owner does not explain how the Specification’s qualified statement that video formats *often* are defined to include audio streams translates into a claim limitation where formats must *always* include audio. *See id.* (stating as support but without explanation: “See, for example, claim 14 of the ‘558 Patent which is directed to the technique of ‘present[ing] a first media stream via the first presentation device utilizing the first media player,’ in the context claimed.”).

Petitioner additionally argues that the inference of a lack of an audio requirement in the challenged patent is further strengthened by the treatment and explicit claiming of audio in a related patent. Pet. Reply 5. Petitioner notes that U.S. Patent No. 8,787,731 B2⁷, having the same named inventor and attorney as the '558 patent, recites “media stream[s]” in independent claim 1 and specifies, in dependent claim 3, that the media streams include an audio stream. Ex. 1027, 28:25, 36, 60–63 (“The computer program product of claim 1 wherein the computer program product is operable such that the first media stream includes a first audio stream and the second media stream includes a second audio stream.”); *compare id.*, codes (72), (74), with Ex. 1001, codes (72), (74). We find Petitioner’s argument persuasive as this again evidences that the claim drafter knew how to craft, when intended, claims directed to a media stream having an audio stream component.

Petitioner also presents credible expert testimony that, in the pertinent timeframe, “[a] media player would typically output a media stream, which is a series of data pertaining to video, audio, or both.” Ex. 1002 ¶ 31; see Pet. Reply 4 (citing the same).

Having considered all of the claim construction arguments and evidence presented by the parties, we conclude that the claim term “media stream” does *not* require audio or, as Patent Owner urges, the handling of audio output or the displaying of *multimedia* streams.

⁷ The '731 patent and the challenged '558 patent each identify U.S. Application No. 12/691,042 as a related application, via a series of continuations, and incorporate by reference that application. Ex. 1027, 1:6–15; Ex. 1001, 1:6–17.

*D. The Alleged Obviousness of
Claims 14–22, 24–28, and 30 over Marano and Murray*

Petitioner, relying on the testimony of Dr. Bederson (Ex. 1002) for support, alleges that all of the challenged claims—claims 14–22, 24–28, and 30 of the ’558 patent—would have been obvious over Marano and Murray. *See, e.g.*, Pet. 52–64 (“claim mapping” for claim 14). Petitioner contends that “Marano allows the output of software on one computer be presented on any of a number of possible devices,” that “Murray, in turn, teaches coordinating among *media players* to avoid interference,” and that “[i]t would have been obvious to use Murray’s idea to coordinate among media players within Marano’s system.” *Id.* at 20 (citing Ex. 1002 ¶¶ 53–55). According to Petitioner, “Murray’s priority system supplements Marano’s system.” *Id.* at 34.

Patent Owner concedes that “Murray describes the use of prioritization to avoid simultaneous media player output.” PO Resp. 21 (citing Ex. 1006 ¶ 25). However, Patent Owner argues that a person of ordinary skill in the art would not have a reason to modify Marano and that the proposed combination fails to “teach handling of audio output data associated with multiple resources.” PO Resp. 28–38. Specifically, Patent Owner argues that the “Marano excerpts relied upon by Dr. Benderson [sic] and cited by Petitioners, [do not] disclose or enable the presentation of a ‘media stream,’ on ‘a second presentation device,’ in the context claimed.” PO Sur-Reply 4; *see id.* at 14, 19 (associating the “second presentation device” argument with independent claim 24 but not independent claim 14). As to dependent claim 26, Patent Owner further argues that the proposed combination lacks the “temporal limitations.” PO Resp. 38–47; *see id.* at 45

(underlining the claim terms “while” and “allowing continuation of the presentation”).

For the reasons given below, we determine Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable over Marano and Murray.

1. Overview of Marano (Ex. 1003)

Marano discloses the use of external display devices with a mobile computing device. Ex. 1003 ¶ 2. “When an external display device is connected or attached to a mobile computing device, output data associated with a resource executing on the mobile computing device may be displayed on the external display device.” *Id.* Figure 2C of Marano is shown below.

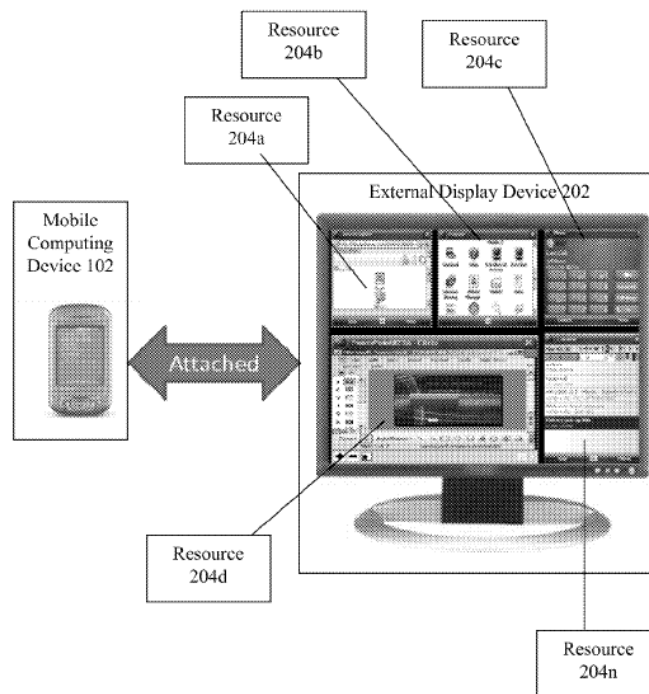


Figure 2C depicts an “embodiment of a system for displaying a plurality of resources in a user-configurable display layout on an external display device.” *Id.* ¶ 22. A “resource” may be an application. *Id.* ¶ 93.

Marano discloses the use of a window management service. As shown in Figure 2A, reproduced below, the window management service is located between the resources and the displays.

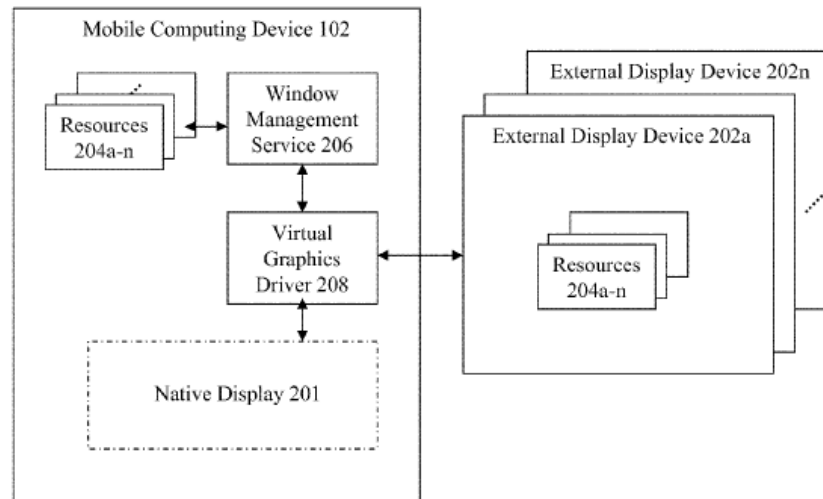


Figure 2A is a block diagram depicting a system for displaying a plurality of resources in a user-configurable display layout on an external display device. *Id.* ¶ 20. “The window management system 206 and virtual graphics driver 208 manage the locations and sizes of the display of output data associated with each of the plurality of resources in a user-configurable display layout.” *Id.* ¶ 91. The window management system may transmit the output of resources to the mobile computing device’s native display, an external display, or a combination thereof. *Id.*

Marano teaches that the window management service may store associations between resources and cells on a grid display layout. *Id.* ¶ 112. “In some embodiments, the user may associate a plurality of resources with the same cell and prioritize the resources to determine which output data will be displayed in the cell if more than one of the associated resources are being executed.” *Id.*

2. *Overview of Murray (Ex. 1006)*

Murray pertains to media players that control the playback of other media players. Ex. 1006 ¶ 2. Murray explains that it was known to have a media player embedded in a web page or a separate application launched upon accessing a web page that streams content. *Id.* ¶ 3. A user may navigate from one website streaming content to another such that two media players produce audio or video output simultaneously. *Id.* This would require the user to locate the media player desired to be stopped and then actively stop that media player. *Id.*

In addressing this, Murray describes the use of prioritization to avoid simultaneous player output.

A user may experience a computer or other system running several media players at the same time. In embodiments of the present invention, these media players coordinate media playback control with each other using bidirectional communications, so that only one media player plays media at a given time. The media players may establish a priority for playback, and only the player with the highest priority may play. When the highest priority player finishes, the system may remove this media player from the priority list, and allow the media player with next highest priority to play. In this way, only one media source plays at any time. Additionally, the media players will respond to user interactions and user interactions will be assigned the highest priority.

Ex. 1006 ¶ 25. Murray further explains that, “[g]enerally, to provide the best end user experience, a media player is assigned the highest priority when the user interacts with it.” *Id.* ¶ 53. For user interaction, Murray describes a media player having visible controls, such as icons or buttons for starting and stopping media. *Id.* ¶ 29. Figure 1 is shown below.

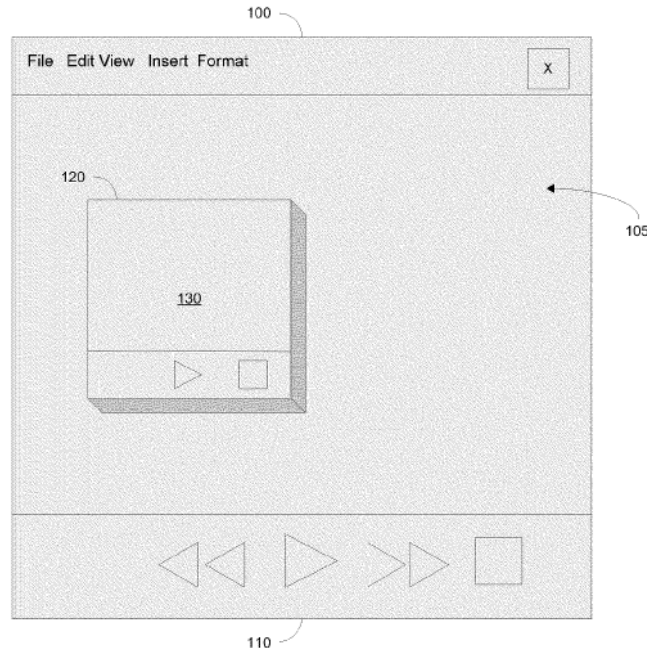


Figure 1 shows an internet browser and two media players. *Id.* ¶ 18.

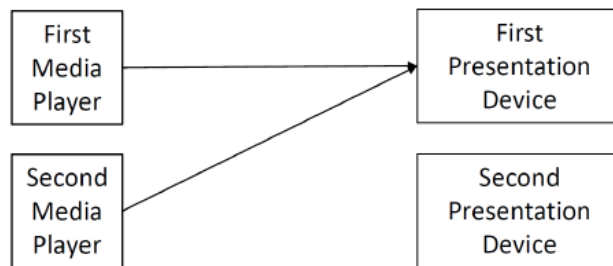
Murray discusses the interaction between two competing media players and the change in priority due to user interaction. *Id.* ¶¶ 52–57. For example, if a user presses “play” on the second media player while the first media player is playing, a priority allocation arises, with the second media playing having highest priority because it is the subject of the most recent user interaction. *Id.* ¶ 52. The change of active media players is explained with reference to Figure 5:

At some later time, second media player 506 will begin to play media. However, before the media can be played, the first media player may be stopped. Thus, in process 525 second media player 506 sends a “stop playing” message to first media player 504 using a LocalConnection. The first media player 504 may then become aware that another media player with higher priority wishes unimpeded access to the audio or video device, and in exemplary embodiments, may pause or stop playing in process 526. On or about the same time, second media player begins to play its own media in process 527.

Id. ¶ 57.

3. *The Alleged Obviousness of Claim 14 in View of Marano and Murray*

As Petitioner notes, independent claim 14 pertains to a scenario where both media players are associated with the first presentation device, as depicted in the diagram below.



Pet. 14 (citing 1002 ¶ 41); see PO Sur-Reply 7 (same or similar); see, e.g., Ex. 1001, 33:35–39 (claim 14 reciting: “pausing the presentation of the first media stream via the first presentation device utilizing the first media player, and presenting a second media stream via the first presentation device utilizing the second media player”). The diagram above, depicting a scenario where both media players are associated with the first presentation device, shows arrows from the First Media Player and the Second Media Player both directed to the First Presentation Device.

a. *14[a]. A first presentation device*

Petitioner asserts, and we agree, that Marano discloses a presentation device in the form of Mobile Computing Device 102 having native display 201. Pet. 52 (citing Ex. 1006 ¶¶ 91–92, Fig. 2A).

b. *[14b] a non-transitory memory storing instructions*

Petitioner asserts, and we agree, that Marano’s Mobile Computing Device is an example of computing device 100, which can have a hard disk drive, for example, storing instructions. *Id.* at 52–53 (citing, *inter alia*,

Ex. 1003 ¶¶ 80, 85, 87). Petitioner persuasively contends that it would have been obvious that, in the computer of the proposed modification, “all subsequent functional claim elements are performed by the execution of instructions.” *Id.* at 53 (citing Ex. 1002 ¶ 111). Patent Owner does not address this feature. We find, based on the arguments and evidence presented by Petitioner, summarized above, that Marano teaches or at least suggests the recited non-transitory memory storing instructions.

c. [14c] a touchscreen

Petitioner asserts that Marano discloses that many modern mobile devices had touch screens, and contends that it would have been obvious to use a touchscreen with Mobile Computing Device 102 “for the known advantages of allowing a user to interact with screen content without carrying an attached keyboard and mouse.” Pet. 53–54 (citing Ex. 1002 ¶ 112). Patent Owner does not address this feature. Petitioner persuasively shows that Marano teaches or suggests the recited touchscreen.

d. [14d] one or more processors in communication with the non-transitory memory and the touchscreen, wherein the one or more processors execute the instructions to . . .

Petitioner asserts that Marano’s computing device 100 has a processor (CPU 121) in communication with storage device 128 to cause loading of software instructions from the storage device to be executed by CPU 121. *Id.* 54–55 (citing Ex. 1003 ¶¶ 75–78). Petitioner contends that a person of ordinary skill in the art “would have understood that the CPU 121 must and obviously did communicate with the touch screen to tell the touch screen what to display, and to receive input commands from the touch screen.” *Id.* at 55 (citing Ex. 1003 ¶ 77; Ex. 1002 ¶ 113). Patent Owner does not address

this feature. Based on the arguments and evidence presented by Petitioner, we find that Marano teaches or suggests the recited “one or more processors in communication with the non-transitory memory and the touchscreen, wherein the one or more processors execute the instructions to”

- e. [14e) instructions to:] simultaneously present a first media player and a second media player, [14f] where the first media player is presented with at least one first input control and the second media player is presented with at least one second input control, the at least one first input control and the at least one second input control each including at least one of a play input control or a pause input control*

Petitioner asserts that Marano teaches providing access to a plurality of resources that can be any application and that Murray teaches multiple media players (applications that play a media stream) in the same computing environment, and that it would have been obvious for Marano’s system to present two media players. Pet. 55–56 (referring to the reasoning in § III.C.2 of the Petition and citing Ex. 1003 ¶¶ 91–93, 104; Ex. 1006 ¶ 3, Fig. 1; Ex. 1002 ¶¶ 115–117, 170). Petitioner further asserts that Marano discloses that the execution of resources—in this case, media players—could be simultaneous, and that Murray discloses, including via Figure 1, two media players simultaneously-presented. *Id.* at 55–56 (citing Ex. 1003 ¶¶ 91, 116, Figs. 2A, 2C; Ex. 1006 ¶¶ 13, 27, Fig 1). Petitioner points to Murray’s Figure 1 as showing a play input control (play button) on the two media players. *Id.* at 57.

We understand Patent Owner to not dispute Petitioner’s contentions regarding these limitations, other than the reasons to combine the references’ teachings. We address below Patent Owner’s arguments in that regard.

Based on the arguments and evidence presented by Petitioner, summarized above, we find that Petitioner persuasively shows that the combination of Marano and Murray teaches or suggests the recited “[14e) instructions to:] simultaneously present a first media player and a second media player, [14f) where the first media player is presented with at least one first input control and the second media player is presented with at least one second input control, the at least one first input control and the at least one second input control each including at least one of a play input control or a pause input control.”

f. [14g) instructions to:] detect a selection of the at least one first input control presented with the first media player

Petitioner asserts that Marano offers the general teaching of standard applications that the user may access and that may be detected in the normal ways by the window management service. Pet. 57-58 (citing Ex. 1002 ¶¶ 72 (sic, ¶ 172), 128; Ex. 1003 ¶¶ 7, 25). Petitioner further asserts that Murray specifically teaches selecting media players to play a media stream, with the media players having standard controls like play and stop buttons. *Id.* at 58–59 (citing Ex. 1006 ¶ 29, Fig. 1). Petitioner persuasively argues that it would have been obvious to detect user interactions with media players because otherwise the system could not respond when, for example, the user presses the play button on a media player. *Id.* at 59 (citing Ex. 1002 ¶¶ 127–131, 143). Patent Owner does not address this feature. We find that, based on the arguments and evidence presented by Petitioner, summarized above, Petitioner persuasively shows that the combination of Marano and Murray teaches or suggests the recited “[instructions to:] detect a selection of the at least one first input control presented with the first media player.”

- g. [14h) instructions to:] in response to the detection of the selection of the at least one first input control presented with the first media player, present a first media stream via the first presentation device utilizing the first media player*

Petitioner asserts that clicking the play button would have caused the media player to present a first media stream as that was typical for media players in 2010, and that the media player would transmit the content to a display. *Id.* at 59–60 (citing Ex. 1002 ¶¶ 134, 173, 192). Thus, argues Petitioner, the presentation would have been in response to the detection of the selection of the play button. *Id.* at 60. Further, Petitioner refers to its earlier arguments (in Sections III.B.1 and III.C.2 of the Petition) that Marano teaches that multiple resources can be configured to a first presentation device, and contends that it would have been obvious for a first media player to present a first media stream via the first presentation device if configured by the user or the system to do so. *Id.* (citing Ex. 1002 ¶¶ 130, 144).

We understand Patent Owner to not dispute Petitioner’s contentions, other than the reasons to combine the references’ teachings, regarding this “first presentation device” limitation. *See, e.g.*, PO Sur-Reply 14, 19 (directing arguments to the “second presentation device” limitation of claim 24); *id.* at 11 (quoting “the first media stream is allowed to be presented via the second presentation device” recitation of independent claim 1, which is not challenged in the instant petition); PO Resp. 35–36 (quoting the “second presentation device” language of claim 24 and referring to unspecified “this or similar [language] in independent claim 14”). To the extent that Patent Owner argues that the proposed combination fails to teach the subject limitation due to a lack of the ability to play audio, we do not find that argument persuasive because, as discussed

above in the context of claim construction (*supra*, Section II.C.3), the term “media stream” does not require audio or, as Patent Owner urges, the handling of audio output. *See id.* at 10 (quoting the last phrase of the subject limitation for the proposition that “the claims require the system to include the ability to play audio and/or video.”).

Based on the arguments and evidence presented by Petitioner, summarized above, we find that Petitioner persuasively shows that the combination of Marano and Murray teaches or suggests the recited “[instructions to:] in response to the detection of the selection of the at least one first input control presented with the first media player, present a first media stream via the first presentation device utilizing the first media player.”

h. [14i) instructions to:] detect, while the first media stream is being presented via the first presentation device utilizing the first media player, a selection of the at least one second input control presented with the second media player

This limitation is similar to that of 14g, discussed above, and involves an input with the second media player, rather than the first. Petitioner reiterates its assertion that Murray detects the selection of the play button of any media player, including the second media player, and including when the first media player is playing. Pet. 61 (referring to the discussions in Sections III.B.2 and III.C.4 of the Petition, and citing Ex. 1006 ¶¶ 5–7, 27, 30–32, 37–0047; Ex. 1002 ¶ 146). Patent Owner does not address this feature. We find that, based on the arguments and evidence presented by Petitioner, summarized above, Petitioner persuasively shows that the combination of Marano and Murray teaches or suggests the recited

“[instructions to:] detect, while the first media stream is being presented via the first presentation device utilizing the first media player, a selection of the at least one second input control presented with the second media player.”

- i. *[14j) instructions to:] in response to the detection of the selection of the at least one second input control presented with the second media player while the first media stream is being presented via the first presentation device utilizing the first media player, cause a change in presentation focus, by: [14k] pausing the presentation of the first media stream via the first presentation device utilizing the first media player, and presenting a second media stream via the first presentation device utilizing the second media player*

Petitioner asserts that Murray discloses that, when one media player is playing and the user or the software selects an input control of a second media player, there will be a change in priority (presentation focus) from the first to the second media player. *Id.* at 61 (citing Ex. 1006 ¶¶ 49, 52, 57, Fig. 5; Ex. 1002 ¶¶ 147, 175). Petitioner contends that it would have been obvious to configure both media players to present on only the first presentation device (*e.g.*, the Mobile Computing Device having a native display) and that it would have been obvious that the second media player (a resource) would have played back on the device for which it was designated (*e.g.*, the first presentation device). *Id.* at 61–62 (citing Ex. 1002 ¶ 148; Ex. 1003 ¶¶ 91, 94).

Petitioner further asserts that Murray discloses that, when the user or the software selects “play” on the second media player, the first media player will be paused or stopped (which, according to Petitioner, is a pausing of the media stream) and the second media player will present (play) via the

first media presentation device. *Id.* at 62 (citing Ex. 1006 ¶¶ 49, 52, 57, Fig. 5).

Patent Owner does not address this feature. We find that, based on the arguments and evidence presented by Petitioner, summarized above, Petitioner persuasively shows that the combination of Marano and Murray teaches or suggests the recited “[instructions to:] in response to the detection of the selection of the at least one second input control presented with the second media player while the first media stream is being presented via the first presentation device utilizing the first media player, cause a change in presentation focus, by: [14k] pausing the presentation of the first media stream via the first presentation device utilizing the first media player, and presenting a second media stream via the first presentation device utilizing the second media player.”

j. [14l] wherein the first presentation device is configured such that the change in presentation focus results from at least one of: a releasing of a first presentation focus in connection with the first media player, a detected user input indication for giving the second media player a second presentation focus, a change in input focus, a change in an attribute of a user interface element, a count of media streams being played, a ranking of media streams being played, a transparency level of at least one of the user interface element, or another user interface element sharing a region of a display of the first presentation device

Petitioner asserts that Murray teaches that user access to a media player should change the priority. Pet. 63 (citing Ex. 1006 ¶¶ 25 (“[T]he media players will respond to user interactions and user interactions will be assigned the highest priority.”), 53; Ex. 1002 ¶ 137). Petitioner maps this with the claim’s recitation of “a detected user input indication for giving the

second media player a second presentation focus.” *Id.* Petitioner further asserts that Murray teaches a change in presentation focus based on a releasing of a first presentation focus in connection with the first media player, based on a ranking of media streams, and a change in an attribute of the user interface element (*e.g.*, pressing a play or stop button). *Id.* at 63–64 (citing Ex. 1006 ¶ 60; Ex. 1002 ¶¶ 138–139). Patent Owner does not address this feature. We find that, based on the arguments and evidence presented by Petitioner, summarized above, Petitioner persuasively shows that the combination of Marano and Murray teaches or suggests the recited feature.

k. Reason to Combine

Petitioner, relying on the testimony of Dr. Bederson, reasons, *inter alia*, that Marano’s system is running multiple resources simultaneously, thereby creating the potential for media player conflict and, because of this, it would have been obvious to utilize Murray’s media player prioritizing technique in Marano’s system to avoid the possible interference. Pet. 35–38 (citing Ex. 1002 ¶¶ 75–80). Petitioner further argues:

[I]t would have been obvious to supplement information already stored by Marano by adding an indication of priority, as suggested by Murray. (Ex. 1002, ¶81). As discussed above in §III.B.1, Marano obviously maintains an association between each executing resource and its assigned presentation device(s). Because Marano associates at least one presentation device with each resource (which can be a media player), and Murray associates a priority with each media player, it would have been obvious to associate each resource with one or more presentation devices (as Marano already teaches) *and* a priority for each associated output device (as Murray renders obvious). (Ex. 1002, ¶81).

Pet. 38–39 (citing Ex. 1002 ¶¶ 80–84). Petitioner refers to the combination of Marano’s information regarding resource-to-presentation-device association with Murray’s priority for associated output as “combined information.” *Id.* at 39. According to Petitioner, “[t]he combined information would have provided the advantage expressly described in Murray, namely avoiding interference between media players, while still maintaining the advantage of Marano—the ability to use multiple output devices.” *Id.* at 39 (citing Ex. 1002 ¶¶ 80, 84).

Petitioner, relying on the testimony of Dr. Bederson, additionally argues that, “[b]ecause the window management service is the software responsible for coordinating between resources and output devices in Marano, it would have been obvious to have it perform this function in the combined system, by storing and using the combined information.” *Id.* at 39–40 (citing Ex. 1002 ¶¶ 85–86).

Petitioner also argues that “it would have been obvious to use Murray’s detect-and-pause functionality to avoid conflicts.” *Id.* at 48 (citing Ex. 1002 ¶ 101). Petitioner reasons, based in part on Murray’s teaching of setting recent user interaction as the highest priority, that a user expects a media player to play upon pressing the “play” button, and, therefore, it would have been obvious to have the system monitor that button and to play the media without interference from other media players. *Id.* at 48–50 (citing Ex. 1002 ¶¶ 77, 101–104, 123).

Petitioner also persuasively argues that there would have been a reasonable expectation of success in combining the references’ teachings as proposed. *Id.* at 50–51; *contra* PO Resp. 4 (Patent Owner arguing, without elaboration or any persuasive explanation, that Petitioner failed to show a

reasonable expectation of success). Petitioner relies on Dr. Bederson's testimony and other evidence for the propositions that the art was relatively predicable and that the pertinent systems were well-known at the relevant timeframe. *Id.* (citing Ex. 1002 ¶ 105; Ex. 1017 ¶¶ 595–596; Ex. 1020, 3–7, 17).

Patent Owner, in its Response, argued that a person of ordinary skill in the art “would not have been motivated to modify the system of Marano with Murray.” PO Resp. 28. In support for that proposition, Patent Owner cited to expert testimony that has since been withdrawn by Patent Owner. *See id.* (citing Ex. 2002); *id.* at 3 (identifying Ex. 2002 as a rebuttal expert report filed in a district court case); Paper 11 at 2 (Joint Stipulation To Expunge Testimony of Dr. Aviel Rubin). Patent Owner, in its Sur-Reply, does not appear to continue to dispute Petitioner's reasoning to combine the references' teachings (*see, e.g.*, PO Sur-Reply 2 (Table of Contents)), but we nonetheless address the arguments in Patent Owner's Response in the interest of completeness.

Patent Owner argued that Petitioner's reasoning to combine is based on “[Dr. Bederson's] unsupported statement that ‘Marano allows any resource to be associated with, and therefore output to or present on, any available output device.’” PO Resp. 33 (quoting Ex. 1002 ¶ 59). Patent Owner alleged that “[t]his is false and is a mischaracterization of Marano.” *Id.* Patent Owner's arguments appear to be premised on the assertion that the claimed “media stream” requires an audio component and that Marano does not disclose the handling of audio data output. *See, e.g., id.* at 35 (“[N]o support is provided by Petitioner to show with specificity how, for example, *audio data* output from a media player (Resource 204a-n of

Mobile Computing Device 102) *would be handled* by the Window Management Service 206 and presented either by the External Display Device 202a-n or Mobile Computing Device 102.” (emphasis added)); *cf.* Pet. Reply 6 (“[Patent Owner] Cypress Lake may also be arguing that Marano’s teachings regarding audio would discourage the combination with Murray. Such an argument would fail at the outset, because neither Murray’s system, nor the motivation behind the combination, requires audio.”).

To the extent that our understanding is correct and Patent Owner’s argument is premised on a requirement of audio handling, the argument is not persuasive because, for the reasons given above in the claim construction discussion, the term “media stream” does not require an audio component or the handling thereof. Additionally, Patent Owner, in the Sur-Reply, backs away from its earlier position and states that “Patent Owner does not dispute that Marano discloses handling of audio output.” PO Sur-Reply 11.

Patent Owner also argues, “Dr. Bederson bases his opinions on personal beliefs and mischaracterizations of the prior art . . . [and t]hus, his declaration cannot establish a reason to modify Marano in the manner Petitioner proposes.” PO Resp. 29 (citing Ex. 1002 ¶¶ 54–104; *In re Am. Acad. Of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) (concerning the lack of factual corroboration for opinions)). To the extent that Patent Owner argues that the testimony of Dr. Bederson regarding a reason to modify Marano is conclusory, we do not find this to be persuasive. Patent Owner merely cites fifty-one paragraphs in Dr. Bederson’s declaration as support for the proposition of conclusory testimony and does not elaborate on the assertion that Dr. Bederson’s expert opinion is based on “personal

beliefs.” *Id.* at 27 (citing Ex. 1002 ¶¶ 54–104). Those cited fifty-one paragraphs contain citations to other evidence in the record and include developed analysis, and are not merely conclusory opinion as Patent Owner may be implying. *See, e.g.*, Ex. 1002 ¶ 55–67 (describing the teachings of Marano that underlie the opinions concerning the obviousness of the claimed subject matter).

As to the “mischaracterizations” argument, Patent Owner implicitly asks us to accept Patent Owner’s characterization of the references over that of Petitioner’s expert. PO Resp. 29–38. Patent Owner argues that Marano should be considered to describe five different inventions and then focuses on certain embodiments that purportedly fail to support Dr. Bederson’s opinion. *See id.* at 12–21, 29–38. For example, Patent Owner admits that “Marano discloses that a ‘resource’ may be an application,” but appears to argue that an ordinary artisan would have read Marano’s disclosure very narrowly, arguing that “the specification and Figures of Marano make clear that the Invention A is directed to, for example, a calendar 420, file explorer 422, and e-mail 424.” *Id.* at 16–17 (citing Ex. 1003 ¶¶ 93, 113, Fig. 4C). Patent Owner also supports its arguments with an unpersuasive hypothetical situation that Patent Owner admits is “illogical but also a technological impossibility” and one that “[o]bviously, no [person of ordinary skill in the art] would assume . . . that Marano disclosed and enabled.” *Id.* at 32–33 (arguing that “running Oracle’s most advanced database on the cellular phone client 102n” is not enabled).

Dr. Bederson’s purportedly unsupported opinion—that “Marano allows any resource to be associated with, and therefore output to or present on, any available output device”—is preceded by support. *See* Ex. 1002

¶ 59. Dr. Bederson discusses Marano’s disclosure and includes the quotation therefrom that states:

In many embodiments, the mobile computing device 102 transmits the output data associated with certain of the plurality of resources 204 to the native display 201 [of mobile computing device 102] and transmits the output data associated with other of the plurality of resources 204 to the external display devices 202a-n.”

Id. (quoting Ex. 1003 ¶ 91) (bolding omitted). We find Dr. Bederson’s opinion to be sufficiently supported and that Marano teaches one of ordinary skill in the art that the several resources may be output to any available output device. We find Dr. Bederson’s testimony to be credible and not outweighed by Patent Owner’s unpersuasive attorney argument, which, in any event, is not evidence.

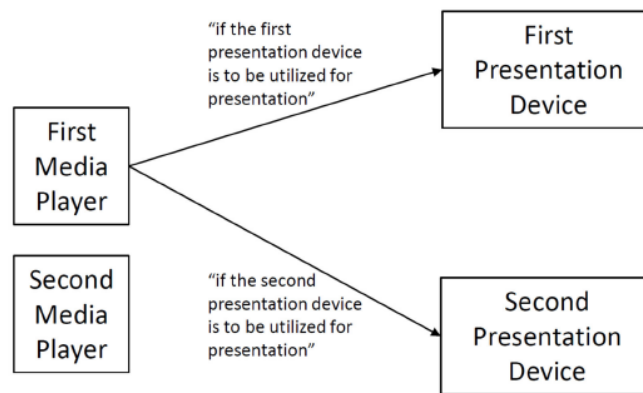
Petitioner has provided adequate reasoning as to why one of ordinary skill in the art would have modified Marano’s windows management system by incorporating Murray’s prioritization technique and that this combination yields the claimed subject matter of claim 14, and Petitioner has provided adequate evidence to show that a person of ordinary skill in the art would have had a reasonable expectation of success in doing so.

l. Conclusion as to Independent Claim 14

Based on the foregoing, Petitioner has established that independent claim 14 is unpatentable over the combination of Marano and Murray.

4. *The Alleged Obviousness of Claim 24 in View of Marano and Murray*

As Petitioner notes, independent claim 24 pertains to a scenario where there is access to two media players and where the first media player is associated with both presentation devices, as depicted in the diagram below.



Pet. 13–14 (citing 1002 ¶ 40); see PO Sur-Reply 8 (same or similar); see, e.g., Ex. 1001, 35:40–51 (claim 24 reciting: “in response to the detection of the selection of the at least one first input control presented with the first media player and if the first presentation device is to be utilized for presentation, allow the first media stream to be presented via the first presentation device . . . and if the second presentation device is to be utilized for presentation, allow the first media stream to be presented via the second presentation device”). The diagram above, depicting a scenario where there is access to two media players and where the first media player is associated with both presentation devices, shows arrows from the First Media Player and directed to both Presentation Devices.

Petitioner asserts, and we agree, that independent claim 24 contains many recitations the same as or similar to those of independent claim 14. See Pet. 64–68. Petitioner argues that those limitations are taught or suggested for reasons provided earlier in the context of the analysis of

claim 14. *Id.* Petitioner elaborates where it identifies differences. Petitioner identifies teachings in the prior art references that teach or suggest all the limitations of independent claim 24, and provides persuasive reasoning as to why the claimed subject matter would have been obvious to one of ordinary skill in the art. Pet. 35–50, 64–68. Petitioner also supports its contentions for these claims with the testimony of Dr. Bederson. Ex. 1002 ¶¶ 103, 115–119, 189–198.

The parties’ dispute regarding claim 24 pertains to the following limitations:

[24i] in response to the detection of the selection of the at least one first input control presented with the first media player and if the first presentation device is to be utilized for presentation, allow the first media stream to be presented via the first presentation device;

[24j] in response to the detection of the selection of the at least one first input control presented with the first media player and if the second presentation device is to be utilized for presentation, allow the first media stream to be presented via the second presentation device.

Ex. 1001, 35:40–51 (identified by Petitioner (Pet. 66–67) as elements [24i] and [24j]; see PO Resp. 35–36 (quoting this claim language in arguing that Marano teaches something different). In other words, when, for example, the play button (an input control) on the first media player is pressed, the system allows the first media stream to be presented by the first presentation device if that first presentation device is to be utilized, and allows that same first media stream to be presented by the second presentation device if that second presentation device is to be utilized.

In its Sur-Reply, Patent Owner clarifies that its contentions pertain to the second part of the quoted matter above, limitation [24j], arguing that, “Marano fails to disclose Patent Owner’s claimed technique wherein [sic]

‘allow the first media stream to be presented via the second presentation device,’ in the context claimed in claim 24.” PO Sur-Reply 19.

For the first part, limitation [24i], Petitioner refers to its earlier contentions regarding limitation [14h], which similarly calls for presenting a first media stream via the first presentation device in response to the detection of an input control presented with the first media player. We again find Petitioner’s contentions persuasive for the reasons discussed above in the context of limitation [14h]. Petitioner notes that limitation [24i], unlike limitation [14h], contains the conditional recitation “if the first presentation device is to be utilized for presentation,” and “allow[ing]” a media stream to be presented. Pet. 66–67. Petitioner persuasively argues that these features would have been obvious. *Id.* (citing Ex. 1002 ¶ 194).

For the second part, limitation [24j], Petitioner notes that this limitation is similar to the immediately-preceding one except that this is directed to presenting on the *second* presentation device, rather than the first, if the second presentation device is to be utilized. *Id.* at 67. Petitioner persuasively argues that this would have been obvious to a person of ordinary skill in the art because, in the proposed combination, “the user can configure any resource to output to any presentation device, and outputting to the second presentation device specifically was obvious. *Id.* (referring to arguments in section III.C.3 of the Petition; citing Ex. 1002 ¶¶ 195–196).

Patent Owner’s arguments pertain to the audio capability of the recited second presentation device. Patent Owner affirmatively states that it “does not dispute that Marano discloses handling of audio output,” but argues that Marano does not disclose or enable the first media stream being allowed to be presented via the second presentation device. PO

Sur-Reply 11, 14, 19; *see also* PO Resp. 5–6, 35–38. We understand Patent Owner to argue that Marano discloses only the recitation of limitation [24i]—involving the first media stream presented via the *first* presentation device—but not the capability of presenting *audio* via the *second* presentation device. *See* PO Sur-Reply 11, 14, 17–19. According to Patent Owner, Marano only discloses speakers or a headphone jack, i.e. audio presentation capability, on Mobile Computing Device 102 (mapped to the claimed first presentation device), but that External Display Device 202 (a second presentation device) merely has a monitor with no speaker. *Id.* at 18–19 (quoting Ex. 1003 ¶ 263); *see also* PO Resp. 5–6, 35–36. Thus, argues Patent Owner, that second presentation device of Marano “cannot play or present a media stream, in the context claimed.” PO Sur-Reply 19. Based on this argument, Patent Owner further argues that Petitioner has failed to “show[] how either Marano or Murray, individually or in combination, would teach handling of *audio* output data associated with multiple resources.” PO Resp. 38 (emphasis added).

Patent Owner’s arguments are not persuasive as they are premised on the contention that the recited “media stream” requires an audio component. As discussed above in the context of claim construction, the term “media stream” does not require audio or, as Patent Owner urges, the handling of audio output or the displaying of *multimedia* streams.

Based on the arguments and evidence presented by Petitioner, summarized above, and after consideration of Patent Owner’s arguments in opposition, we determine that Petitioner has provided adequate reasoning as to why one of ordinary skill in the art would have modified Marano’s windows management system by incorporating Murray’s prioritization

technique and that this combination yields the claimed subject matter of claim 24—including the recited associated relationships of the first media stream being allowed to be presented via the first and second presentation devices, respectively, when so indicated and in response to the detection of the selection of an input control presented with the first media player. We also determine that Petitioner has provided adequate evidence to show that a person of ordinary skill in the art would have had a reasonable expectation of success in doing so. *See* Pet. 50–51 (citing Ex. 1002 ¶ 105).

Petitioner has established that independent claim 24 is unpatentable over the combination of Marano and Murray.

5. The Alleged Obviousness of Claims 15–22, 25, 27, 28, and 30 Over Marano and Murray

Petitioner also contends that claims 15–22, 25, 27, 28, and 30 would have been obvious based on the same combination of prior art. These challenged claims all depend directly or indirectly from independent claim 14 or independent claim 24. Petitioner identifies teachings in the prior art references that teach or suggest the limitations of these dependent claims, and provides persuasive reasoning as to why the claimed subject matter would have been obvious to one of ordinary skill in the art. Pet. 69–80. Petitioner also supports its contentions for these claims with the testimony of Dr. Bederson. Ex. 1002 ¶¶ 178–208. Patent Owner does not present any arguments for these dependent claims other than what we have already considered with respect to independent claims 14 and 24.

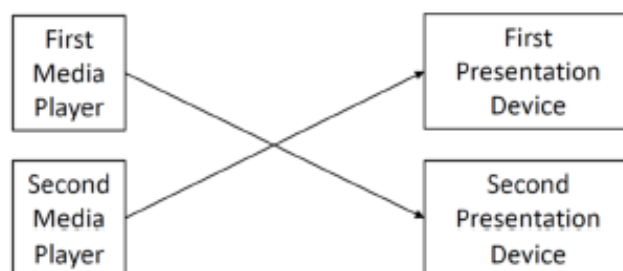
We have considered the evidence and arguments of record and determine that Petitioner has demonstrated by a preponderance of the evidence that claims 15–22, 25, 27, 28, and 30 would have been obvious

based on Marano and Murray for the reasons discussed in the Petition as supported by the testimony of Dr. Bederson.

6. The Alleged Obviousness of Claim 26 Over Marano and Murray

Claim 26 depends from claim 25, which depends from independent claim 24. Petitioner contends that claim 26 would have been obvious based on the same combination of prior art discussed above. Pet. 70–72. Patent Owner asserts that claim 26 contains “temporal” limitations (PO Resp. 44–45) and argues that Marano and Murray fail to disclose those limitations (*id.* at 42–47).

Claim 26 describes the media player/presentation device relationship as “a second scenario” where there is “presentation of the first media stream via only the second presentation device utilizing the first media player while presenting the second media stream via only the first presentation device utilizing the second media player.” Ex. 1001, 36:22–23, 36:40–44. The parties visually describe this relationship with the diagram shown below.



Pet. 72; *see also* PO Resp. 42 (same or similar). The diagram above depicts the First Media Player presenting on the Second Presentation Device and the Second Media Player presenting on the First Presentation Device.

Like independent claims 14 and 24, dependent claim 26 calls for a device having processor(s) that execute certain instructions. *See* Ex. 1001,

33:5–10 (independent claim 14), 35:18–23 (independent claim 24), 36:1–3 (preamble of dependent claim 25), 36:22–24 (preamble of dependent claim 26). Claim 26 recites, in pertinent part, the following such instructions.

detect, *while the first media stream is being presented* via the second presentation device utilizing the first media player, a selection of the at least one second input control presented with the second media player; and

in response to the detection of the selection of the at least one second input control presented with the second media player while the first media stream is being presented via the second presentation device utilizing the first media player, perform the change in the presentation focus, by: *allowing continuation of the presentation of the first media stream* via only the second presentation device utilizing the first media player *while presenting the second media stream* via only the first presentation device utilizing the second media player.

Ex. 1001, 36:30–44 (emphasis added). In other words, claim 26 calls for: 1) detecting an input control (*e.g.*, pressing “play”⁸) on the second media player while the first media player is presenting the first media stream on the second presentation device, and 2) in response to that input detection, allowing the first media stream presentation to continue during presentation of the second media stream from the second media player to the first presentation device—i.e. the crossed-arrow scenario depicted above.

Petitioner, relying on the testimony of Dr. Bederson, persuasively argues that the crossed-arrow scenario (two player/presenter pairs) would have been obvious in the proposed combination, which involves managing

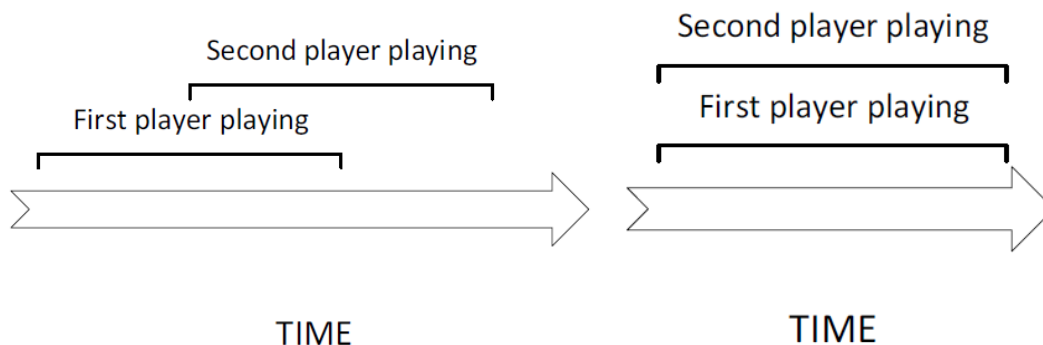
⁸ Figure 7 of the ’558 patent depicts “[a]pplication windows 704 [that] include respective command bars 706 with input controls for receiving user input to change the operational state of the respective media players represented,” with those command bars including “Play,” “Stop,” “Reverse,” and “FForward.” Ex. 1001, 17:48–63, Fig. 7.

multiple players and presenters. Pet. 70–72 (addressing claims 16 and 26 together). In support, Petitioner points to Murray’s prioritization method for controlling multiple media players so as to avoid interference from each other and points to Murray’s teaching that, “in some embodiments other media players may play other media at the same time.” *Id.* (quoting Ex. 1006 ¶ 51; citing Ex. 1006 ¶¶ 30, 49, 62; Ex. 1002 ¶ 180). Petitioner maintains that, “[w]here a different presentation device is used for each media player, it would have been obvious to allow both media players to play, for example where the presentation devices are in separate rooms, connected to headphones, or where the audio would not interfere.” *Id.* at 71 (citing Ex. 1002 ¶ 180).

Patent Owner argues that Petitioner’s two-room, two-player hypothetical situation is not suggested by Murray because “Murray merely discloses simultaneous playback in the context of a problem being solved by pausing one of the players (to avoid such undesired simultaneous playback).” PO Resp. 44. Patent Owner further argues that “[t]here is not even a suggestion [in Murray] of tackling the problem with simultaneous playback via different presentation devices.” *Id.* Patent Owner’s argument, as we understand it, is that Murray does not suggest the crossed-arrow relationship between player/presenter pairs. This argument is not persuasive as it fails to address Petitioner’s proposed combination of two references’ teachings, appears to require an explicit disclosure of the particularly claimed relationship, fails to address (while characterizing Murray’s teaching as limited to pausing a player to avoid simultaneous playback) Murray’s explicit statement that “other media players may play other media at the same time,” and ignores the ordinary creativity that the ordinary

artisan would bring to bear. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”); *see also* Pet. Reply 25–27 (Petitioner reiterating that the ground is based on the combination, not one reference in isolation).

Patent Owner then attacks Marano, arguing “while Petitioner’s cites to Marano [to] address simultaneous playback via different presentation devices, they simply do NOT rise to the level of specificity of the ‘temporal’ limitations.” PO Resp. 44. Patent Owner presents two diagrams, reproduced below, as demonstrative of its argument regarding the purportedly limited disclose of Marano.



Id. at 46. The demonstrative diagrams above depict Patent Owner’s interpretation of timelines showing the relative times when two players are playing in Marano. Patent Owner then argues that “disclosing, as in Marano, that a first player plays and a second player plays, as displayed pictorially, fails to teach the specific limitations of Claim 26, consistent with [the crossed-arrow player/presenter relationship].” *Id.* at 46–47. Patent Owner does not elaborate on this argument in the Response or in its Sur-Reply after Petitioner replied to this argument, Pet. Reply 22–27. We fail to understand the basis for Patent Owner’s argument that the “temporal” limitations are missing, particularly where Patent Owner’s own demonstratives above depict two players playing simultaneously. To the

extent that Patent Owner is arguing that Marano alone fails to explicitly disclose simultaneously streaming two streams to two presentation devices, this argument is unpersuasive for the same reasons given in the context of Patent Owner's attack on Murray alone.

Petitioner has demonstrated via persuasive argument and evidence, including credible expert opinion, that all of the limitations of claim 26 are disclosed and suggested by the combination of Marano and Murray, and that the claimed subject matter would have been obvious to a person of ordinary skill in the art at the time of the invention. Pet. 41–50, 70–72; *see also* Pet. Reply 22–27.

E. Patent Owner's Appointments Clause Argument

In its Sur-Reply Brief, Patent Owner “asserts that this proceeding violates the appointments clause of the U.S. Constitution.” PO Sur-Reply 19. Specifically, Patent Owner argues that the Administrative Patent Judges (APJs) are improperly appointed principal officers and that the decision of the United States Court of Appeals for the Federal Circuit in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019) was an erroneous and “ineffective attempt to cure the identified constitutional violation.” *Id.* at 19–20. Patent Owner further argues that “the *Arthrex* panel did not go far enough in resolving the constitutional infirmity of the APJs,” that “the only remedy is to declare the entire system constitutionally flawed and let Congress fix it,” and, “[t]hus, the only proper remedy at this point is that every ruling from institution forward be addressed de novo by APJs appointed in a Constitutional manner, which at present is not possible, making the only real proper remedy the vacating of this entire proceeding including the institution decision.” *Id.* at 20–21.

We decline to consider Patent Owner’s constitutional challenge as the issue has been addressed by the Federal Circuit in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320, 1328 (Fed. Cir. 2019).

III. CONCLUSION⁹

Petitioner has shown by a preponderance of the evidence that claims 14–22, 24–28, and 30 of the ’558 patent would have been obvious over Marano and Murray.

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
14–22, 24–28, 30	103(a)	Marano, Murray	14–22, 24–28, 30	
Overall Outcome			14–22, 24–28, 30	

IV. ORDER

For the foregoing reasons, it is

ORDERED that claims 14–22, 24–28, and 30 of the ’558 patent have been proven to be unpatentable;

⁹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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

IPR2019-00391
Patent 9,817,558 B1

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