

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
Petitioner,

v.

CUSTOMPLAY, LLC,
Patent Owner.

Case IPR2018-01498
Patent 9,380,282 B2

Before J. JOHN LEE, JESSICA C. KAISER, and JOHN R. KENNY,
Administrative Patent Judges.

LEE, *Administrative Patent Judge.*

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

INTRODUCTION

Amazon.com, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 4, 7–9, 12, 14, 16, 18, and 19 (“the challenged claims”) of U.S. Patent No. 9,380,282 B2 (Ex. 1001, “the ’282 Patent”). CustomPlay, LLC (“Patent Owner”) timely filed a Preliminary Response (Paper 6, “Prelim. Resp.”). Upon our authorization (Paper 7), Petitioner also filed a Reply to Patent Owner’s Preliminary Response (Paper 8, “POPR Reply”), and Patent Owner filed a Preliminary Sur-Reply (Paper 10, “POPR Sur-Reply”).

We have authority to institute an *inter partes* review only if the information presented in the Petition shows “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). An *inter partes* review may not be instituted on fewer than all claims challenged in the Petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

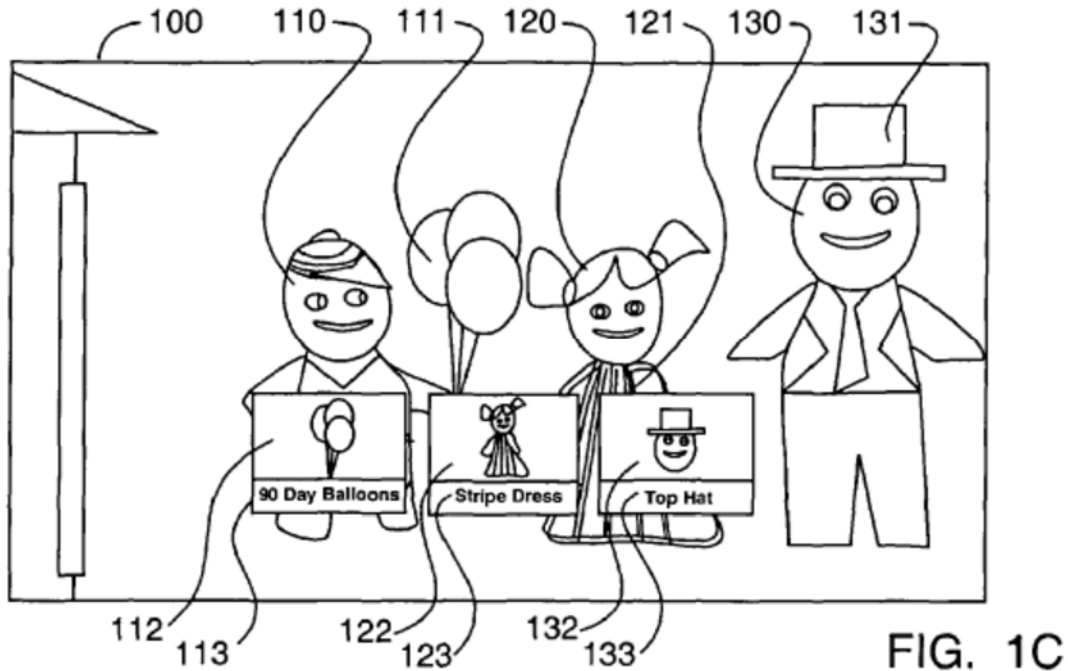
Upon consideration of the Petition and Preliminary Response, we determine that the information presented shows there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of each of the challenged claims. Accordingly, we institute an *inter partes* review of the challenged claims of the ’282 Patent.

A. *Related Cases*

The parties identify as related to the present case *CustomPlay, LLC v. Amazon.com, Inc.*, Case No. 9:17-cv-80884 (S.D. Fla.). Pet. 1; Paper 4, 1.

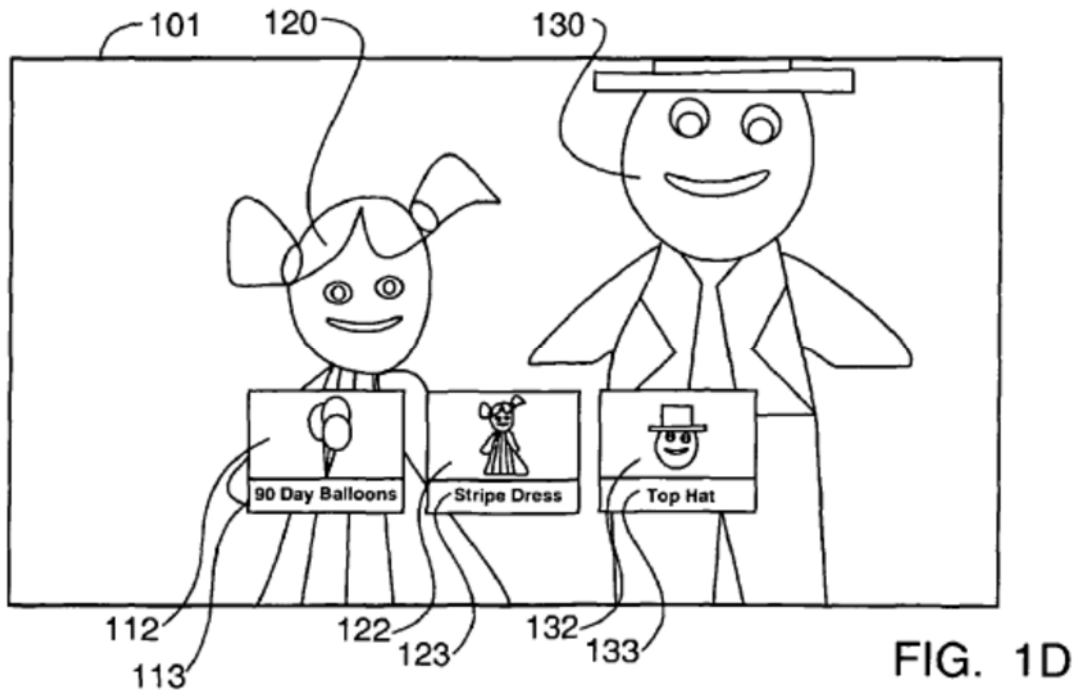
B. The '282 Patent

The '282 Patent relates to providing information to a user during a video regarding a purchasable item in that video. Ex. 1001, 1:64–67. In accordance with the claimed invention, as shown in Figure 1C (reproduced below), item information is presented during video playback.



Ex. 1001, Fig. 1C. Figure 1C depicts an embodiment of the claimed invention where, in response to a user request, item information for items depicted in the video is superimposed onto the video. *Id.* at 8:33–54. For example, information about balloons 111 held by a boy in the video is displayed in the form of image 112 and textual identification 113, which identifies the item as “90 Day Balloons.” *Id.* at Fig. 1C, 8:39–43. Similarly, information about dress 121 worn by a girl in the video is displayed in the form of image 122 and textual identification 123, which identifies the item as “Stripe Dress.” *Id.* at Fig. 1C, 8:43–46.

The '282 Patent notes that the example shown in Figure 1C “presumes that the user has activated the item identification routines at that instance that the target item is on the screen,” but that such is often not the case. *Id.* at 9:35–41. “A user may request item information for an item that was just depicted but is no longer currently depicted” *Id.* at 9:41–43. To address such a scenario, “the request location . . . may be adjusted to include the request location and a predetermined play period prior to the request location, for example, 10 seconds.” *Id.* at 9:48–51. This is shown in Figure 1D, which is reproduced below.



Ex. 1001, Fig. 1D. Figure 1D depicts a video frame “at a subsequent instance within the same clip that includes the video frame 100 shown in FIG. 1C.” *Id.* at 9:61–63. Although the boy and balloons are no longer depicted, image 112 and textual identification 113 of the balloons are still provided. *Id.* at Fig. 1D. In this instance, “the item identification routines are configured to search a plurality of segment definitions to identify

segment definitions that are responsive to the request location and a predetermined play period prior to the request location.” *Id.* at 10:1–4. Thus, information about the girl’s dress (122, 123) depicted at the request location as well as information about the balloons (112, 113) depicted at a play period prior to the request location are both displayed. *Id.* at Fig. 1D.

C. Challenged Claims

Petitioner challenges claims 4, 7–9, 12, 14, 16, 18, and 19 of the ’282 Patent. Claim 4 is illustrative and is reproduced below:

4. An apparatus capable of processing data and instructions executable by a processor; the apparatus, when executing the instructions, performs the steps of:

receiving, from a user during a playing of a video, a request for information relating to a depiction within the video;

identifying a request location that is responsive to the request for information;

retrieving, from a plurality of video frame identifiers, a first video frame identifier that is responsive to the request location, and contemporaneously retrieving a second video frame identifier that is different from the first video frame identifier and that is responsive to a location that is prior to the request location; and

displaying information associated with the first video frame identifier, and contemporaneously displaying information associated with the second video frame identifier that is different from the information associated with the first video frame identifier.

D. Asserted Grounds of Unpatentability and Asserted Prior Art

Petitioner asserts that the challenged claims are unpatentable under 35 U.S.C. § 103(a) based on the combinations of prior art references below. Petitioner also relies on the Declaration of Alan C. Bovik (Ex. 1002).

| References | Claims Challenged |
|---|--------------------------|
| McIntire ¹ and Dey ² | 4, 9, 12, 14, 16, 19 |
| McIntire, Dey, and Abecassis ³ | 7, 8, 18 |
| Bergen ⁴ and Reimer ⁵ | 4, 9, 12, 14, 16, 19 |
| Bergen, Reimer, and Abecassis | 7, 8, 18 |
| Armstrong ⁶ | 4, 9, 12, 14, 16, 19 |
| Armstrong and Abecassis | 7 |

ANALYSIS

A. Denial Under 35 U.S.C. §§ 314(a), 325(d)

As an initial matter, Patent Owner argues that the Petition should be denied under an exercise of the Board’s discretion under § 314(a) and/or

¹ U.S. Patent Application Publication No. 2007/0250901 A1, published Oct. 25, 2007 (Ex. 1004, “McIntire”).

² U.S. Patent No. 6,965,890 B1, issued Nov. 15, 2005 (Ex. 1023, “Dey”).

³ U.S. Patent No. 6,038,367, issued Mar. 14, 2000 (Ex. 1024, “Abecassis”).

⁴ U.S. Patent No. 6,956,573 B1, issued Oct. 18, 2005 (Ex. 1028, “Bergen”).

⁵ U.S. Patent No. 5,696,905, issued Dec. 9, 1997 (Ex. 1005, “Reimer”).

⁶ U.S. Patent Application Publication No. 2007/0003223 A1, published Jan. 4, 2007 (Ex. 1021, “Armstrong”).

§ 325(d). Prelim. Resp. 7–10. For the reasons explained below, we decline to do so.

First, although Patent Owner appears to contend the Petition should be denied under § 325(d), no analysis is presented that would support such a denial. *See id.* at 7. Under § 325(d), “[i]n determining whether to institute or order a proceeding . . . the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” Patent Owner does not clearly explain whether or why the same prior art or arguments previously were presented to the Office. Nor does Patent Owner address any of the factors the Board has previously considered in determining whether to deny institution under § 325(d). *See, e.g., Becton, Dickinson & Co. v. B. Braun Melsungen AG*, Case IPR2017-01586, slip op. at 17–18 (PTAB Dec. 15, 2017) (Paper 8) (informative). Thus, we decline to exercise our discretion under § 325(d) to deny the Petition.

With respect to § 314(a), Patent Owner argues exercising our discretion to deny the Petition is warranted for two principal reasons. First, Patent Owner argues Petitioner was dilatory in filing the Petition because it was not filed until one day before the deadline set forth in 35 U.S.C.

§ 315(b). Prelim. Resp. 8. Patent Owner further alleges this delay was “for the purpose of obtaining a tactical advantage,” namely waiting until further information regarding Patent Owner’s litigation positions became available. POPR Sur-Reply 4–5.

Second, Patent Owner argues that the related district court case in which the ’282 Patent is being asserted against Petitioner is at an “advanced stage,” which compels denial. Prelim. Resp. at 8–10 (citing *NHK Spring Co.*

v. Intri-Plex Techs., Inc., Case IPR2018-00752, Paper 8 (PTAB Sep. 12, 2018); *Mylan Pharmaceuticals, Inc. v. Bayer Intellectual Property GmbH*, Case IPR2018-01143, Paper 13 (PTAB Dec. 3, 2018)). According to Patent Owner, “discovery will close on February 28, 2019, and trial is set for August 19, 2019,” which indicates that a final written decision in the present case is likely to be entered months after the end of the district court trial. POPR Sur-Reply 5 (citing Ex. 1032). Based on the reasoning in the *NHK* decision and *Mylan*, Patent Owner argues denial of the Petition is warranted to avoid duplicative litigation that is contrary to the intent of Congress in enacting the America Invents Act⁷ (“AIA”). POPR Sur-Reply 3–4.

Patent Owner’s arguments are not persuasive. Section 315(b) provides a one-year period after service of a complaint alleging infringement of a patent in which a party may file a petition seeking *inter partes* review of that patent. 35 U.S.C. § 315(b). The statute does not set forth any basis for treating petitions differently depending on which day within that year they are filed, nor does Patent Owner identify any authority supporting such an interpretation. Thus, the fact that the Petition was filed near (but before) the end of the § 315(b) period does not, by itself, support denial of institution.

Nor are we persuaded by Patent Owner’s allegations regarding Petitioner’s intent behind the timing of the filing of the Petition. Petitioner acknowledges that it waited to file the Petition “to try to better understand the asserted claims, the bases for the infringement allegations [by Patent Owner], and to identify relevant prior art.” POPR Reply 3. Regardless of

⁷ See generally Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

whether that can be characterized as seeking “tactical advantage” (POPR Sur-Reply 5), we are not persuaded it constituted improper conduct or warrants denial of institution. Indeed, as Petitioner notes (POPR Reply 3), the legislative history of the AIA indicates that Congress was aware the one-year period in § 315(b) would be used for this sort of activity, namely as “a reasonable opportunity to identify and understand the patent claims that are relevant to the [district court] litigation” given the challenge of determining “in the first few months of the litigation which claims will be relevant and how those claims are alleged to read on the defendant’s products.” *See* Ex. 1030 at S5429 (statement of Sen. Kyl). Thus, Petitioner’s alleged motivation for waiting to file the Petition is insufficient to persuade us to exercise our discretion to deny the Petition.

Finally, based on the information presented, we disagree with Patent Owner’s contention that the related district court case is at an “advanced stage” such that denial of the Petition is warranted. Petitioner represents (and Patent Owner does not dispute) that no fact depositions have yet taken place. POPR Reply 4. No claim construction hearing has yet been held; in fact, the district court canceled its previously scheduled claim construction hearing (Ex. 1032), and neither party has indicated that it has been rescheduled. Patent Owner’s assertion that “discovery will close on February 28, 2019” (POPR Sur-Reply 5) is misleading. In fact, that deadline only applies to discovery *pertaining to claim construction*, and a claim construction hearing will only be scheduled *after* that deadline. Ex. 1032. Moreover, the court recently granted a joint motion to *extend* deadlines for discovery such that both fact and expert discovery would end over three

months after the issuance of a claim construction *ruling* (i.e., at some point after the hearing). Ex. 3001.

We decline to speculate about whether the district court is likely to postpone the current trial date, and we similarly place little weight on Petitioner’s “commitment” to seek a stay of the district court case if an *inter partes* review is instituted (or on the chances the district court will grant such a stay). See POPR Reply 1, 4. Nonetheless, we agree with Petitioner that the present case is distinguishable from both *NHK* and *Mylan*. See *id.* at 4–5. In *NHK*, the corresponding district court case was “nearing its final stages” in that district court had already issued claim constructions, and expert discovery was set to end in less than two months. *NHK*, Paper 8, 20. Moreover, “the advanced state of the district court proceeding” was considered as an “additional factor,” and the panel also determined that the facts of that case warranted denial of institution under § 325(d) as well. *Id.* at 18, 20–21. Similarly, in *Mylan*, the related district court case was in an “advanced stage” in that the district court had already issued claim constructions, and the trial date was less than four months away. *Mylan*, Paper 13, 13. The district court case was also just one of ten cases consolidated together for trial. *Id.* at 1.

Patent Owner also cites *Thermo Fisher Scientific, Inc. v. Regents of the University of California*, Case IPR2018-01370, Paper 11 (PTAB Feb. 7, 2019), but that case also is distinguishable. See POPR Sur-Reply 1.⁸ Similar to *NHK* and *Mylan*, the district court in *Thermo Fisher Scientific* had

⁸ Although Patent Owner cites “Paper 8” of IPR2018-01370, this clearly is a typographical error because Paper 11 is the Board’s institution decision issued on February 7, 2019.

already issued a claim construction order, expert discovery had already ended, and the trial date was only three months away. *Thermo Fisher Scientific*, Paper 11, 26–27. For all of the above reasons, we decline to exercise our discretion under § 314(a) to deny institution.

B. Constitutionality of Inter Partes Review of Pre-AIA Patents

Patent Owner argues that “subjecting pre-AIA patents to IPR would be a substantial and unconstitutional new impairment upon the property rights of patent owners in existing patents.” Prelim. Resp. 10–11. Aside from a brief, conclusory paragraph making this assertion, Patent Owner does not provide sufficient explanation or authority to support its view. Thus, we are unable to assess Patent Owner’s constitutionality argument, and we do not consider it at this time as a result. We note, however, that the application for the ’282 Patent was filed on March 26, 2012, five months after the AIA was enacted on September 16, 2011. Ex. 1001, at [22]. Further, the ’282 Patent was not issued until June 28, 2016, nearly four years after the provisions of the AIA implementing *inter partes* reviews became effective on September 16, 2012. *Id.* at [45]. Thus, the basis for Patent Owner’s contention that the ’282 Patent is a pre-AIA patent that was not “‘granted subject to the qualification’ of IPR” (Prelim. Resp. 10) is unclear.

C. Claim Construction

For petitions filed before November 13, 2018, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Petitioner contends no express claim constructions are necessary to resolve

the issues presented in the Petition. Pet. 10. Patent Owner contends the inventor acted as its own lexicographer in presenting a number of definitions in the Specification of the '282 Patent, and asserts that these definitions “should be followed and adopted by the Board.” Prelim. Resp. 7. We determine no claim terms in the '282 Patent require express construction for purposes of this Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

D. Alleged Unpatentability Under § 103(a)

A claim is unpatentable under § 103 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) objective evidence of nonobviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); *see In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

1. *Level of Ordinary Skill*

Petitioner asserts that a person of ordinary skill in the art would have had a bachelor's degree in electrical engineering, computer engineering, or computer science, as well as three years of experience in the design of digital video systems. Pet. 9 (citing Ex. 1002 ¶¶ 24–26). At this stage of the case, Patent Owner does not dispute Petitioner's formulation of the level of skill in the art. Based on the information and testimony presented with the Petition, we adopt Petitioner's formulation for purposes of this Decision.

2. *Secondary Considerations of Non-Obviousness*

Neither party presents any evidence or argument regarding secondary considerations of non-obviousness relating to any challenged claim at this stage of the case. Thus, we do not address any such considerations in our analysis for this Decision.

3. *Obviousness Based on Bergen and Reimer*

Petitioner asserts that claims 4, 9, 12, 14, 16, and 19 would have been obvious over Bergen in view of Reimer. Pet. 38–53. Bergen is directed to “an information database suitable for providing a scene-based video information to a user.” Ex. 1028, 2:29–31. When a user submits a query to the system, the database may be used to retrieve, for example, all the scenes showing a particular actor. *Id.* at 14:10–15, 14:31–36. The database may be indexed and accessed “according to temporal attributes,” such as “[f]rame viewing time, e.g., the time from the beginning of the video, which is equivalent to a frame number,” or “[s]cene viewing time, which is equivalent to a scene number.” *Id.* at 15:37–43. This indexing may be used to respond to user queries by providing several frames or scenes. *Id.* at

15:50–52. In one embodiment (a “Video-Book”), a temporal index can be used to display scenes of a video program in a “storyboard.” *Id.* at 20:23–33. The user can request further information about a particular scene in the storyboard, and view that and other scenes. *Id.* at 20:34–42.

Reimer relates to a system for “providing on demand access to information related to a movie while the movie is being presented to a user.” Ex. 1005, 3:27–29.

The invention operates by presenting the movie to the user, and then receiving from the user a query pertaining to the movie. The invention determines a frame of the movie that was being presented to the user when the user issued the query (the invention may extract this information from the query, or may extract this information from the movie itself). The invention identifies, as specified by the query, portions of the movie related information relating to the frame, and retrieves those portions of the movie related information. These retrieved portions of the movie related information are presented to the user.

Id. at 3:31–41.

a. Claim 4

According to Petitioner (Pet. 39–42), Bergen teaches the “receiving . . . a request for information” limitation of claim 4 in its disclosure of “query requests” submitted by a user via a “client” to an “access engine.” Ex. 1028, 4:37–47. Bergen describes various types of queries that can be used to access the video information database via the access sub-system. *Id.* at 14:13–30. “A textual query may comprise, e.g., a command to ‘find all video frames . . . showing a specific actor’” *Id.* at 14:13–17. “A linear video browsing technique may comprise, e.g., pointing to a specific displayed object, such as a baseball player . . . and retrieving other scenes including the identified object (player)” *Id.* at 14:21–26. Thus,

Petitioner contends, Bergen teaches, “receiving, from a user . . . a request for information relating to a depiction within the video.” Pet. 40.

Claim 4 further requires that the request for information from the user be received “during a playing of a video.” Petitioner first relies on Bergen’s description of a “linear video browsing technique” for submitting a query, which may comprise “pointing to a specific displayed object, such as a baseball player, using a pointing device.” Ex. 1028, 14:21–24; *see also id.* at 15:4–6 (“The query specification may be selected using, e.g., a pointing device to select a particular portion of a displayed image.”). According to Petitioner, these disclosures would have suggested to an ordinary artisan that the query may be submitted as the video is played, i.e., when the object is displayed. Pet. 41.

In addition, Petitioner cites Reimer’s disclosure of “presenting the movie to the user, and then receiving from the user a query pertaining to the movie,” as part of its system “for providing on demand access to information related to a movie while the movie is being presented to a user.” Ex. 1005, 3:28–34; *see also id.* at 16:5–7 (“The user can send a query . . . at any time while viewing and/or interacting with a movie”); Pet. 41–42. The Petition (*id.* at 42) cites Dr. Bovik’s testimony that a person of ordinary skill would have been motivated to combine this aspect of Reimer with the teachings of Bergen because doing so would have advantageously “provide[d] the viewer with supplemental information for video that they are watching,” and further because Bergen and Reimer are “directed to similar systems” such that an ordinary artisan “would have had a reasonable expectation of success in combining them.” Ex. 1002 ¶ 115.

At this stage of the case, Patent Owner does not dispute these contentions. Based on the arguments and evidence discussed above, we find for purposes of this Decision that Petitioner has shown sufficiently that Bergen and Reimer teach this limitation.

Next, the Petition relies on Bergen and Reimer as teaching the “identifying a request location” limitation of claim 4. Pet. 42–44. Bergen discloses indexing of video information according to “temporal attributes.” Ex. 1028, 15:37–49. In one example, Bergen describes such indexing based on “the time from the beginning of the video,” or equivalently by “frame number.” *Id.* at 15:39–41. Using this indexing, “the user querying the video information database . . . may retrieve several frames or scenes.” *Id.* at 15:50–52. According to Petitioner, this would “require identifying the current frame or point of time in the video (request location).” Pet. 42 (citing Ex. 1002 ¶¶ 117–120).

Additionally, Reimer discloses determining “the time code corresponding to the current frame,” i.e., “the frame that was being presented on the user device when the user issued the query.” Ex. 1005, 16:61–63, 17:3–5; *see also id.* at 3:34–37 (“The invention determines a frame of the movie that was being presented to the user when the user issued the query . . .”).

Patent Owner does not dispute these contentions at this juncture. Based on the arguments and evidence discussed above, we find for purposes of this Decision that Petitioner has shown sufficiently that Bergen and Reimer teach this limitation as well.

With respect to the final steps of claim 4 that recite retrieving first and second “video frame identifiers” and displaying information associated with

those identifiers, Petitioner relies on Bergen. Pet. 44–47. As Petitioner notes, Bergen discloses an “access engine” that, in response to a user request, “accesses the video information database and identifies video frames and/or scenes . . . that satisfy the user request.” Ex. 1028, 14:31–37. This information, as discussed above, may be indexed by “temporal attributes,” such as “frame number,” which Petitioner reads on the recited “video frame identifier.” *Id.* at 15:37–41; Pet. 45. Once identified, the requested video frames/scenes are formatted for the user, for example, in “storyboard form.” *Id.* at 15:28–36.

As discussed above, Bergen describes a user submitting a query by requesting all video frames depicting a particular actor, or by “pointing to a specific displayed object, such as a baseball player,” to retrieve other scenes that include the object (player). *Id.* at 14:13–15, 14:21–25. Petitioner argues that Bergen consequently teaches that the system could retrieve the current frame (e.g., the current frame depicting the player that the user pointed to) together with all earlier frames featuring the same player, for example, including the frame number. Pet. 45–46. Thus, Petitioner contends Bergen teaches retrieving a first video frame identifier (e.g., frame number), from a plurality of such identifiers (e.g., all frame numbers), responsive to the request location (e.g., current frame with the selected baseball player). *See id.* In addition, Petitioner contends Bergen teaches contemporaneously retrieving (i.e., in the same search) a second video frame identifier (frame number) that is different from the first identifier and is responsive to a location prior to the request location (e.g., for an earlier frame with the same player). *See id.* at 47.

Petitioner further asserts that Bergen teaches displaying information associated with these different video frame identifiers, as recited in claim 4. Pet. 48–49. Specifically, Petitioner relies on Bergen’s disclosures relating to the “storyboard” that displays all of the frames retrieved for a user query. *See* Ex. 1028, 15:28–36; *see also id.* at 20:28–39 (describing a “Video-Book” embodiment in which a temporal index is used to present key frames of scenes to a user “in a storyboard (i.e., linear) fashion” upon request). Relying also on Dr. Bovik’s testimony, Petitioner argues an ordinary artisan would have understood these disclosures to teach displaying information (e.g., key frames) associated with different video frame identifiers (e.g., different frames with the same baseball player) contemporaneously (e.g., as part of the same storyboard). Pet. 48–49 (citing Ex. 1002 ¶¶ 135, 138).

Based on the arguments and evidence discussed above, we find for purposes of this Decision that Petitioner has shown sufficiently that Bergen teaches the “retrieving” and “displaying” limitations of claim 4. Although Patent Owner disputes that Bergen teaches these limitations (Prelim. Resp. 32–39), its arguments presented at this stage are unpersuasive.

Patent Owner asserts that Bergen teaches away from the subject matter of the challenged claims (Prelim. Resp. 35–36), but fails to identify any portions of Bergen that “criticize, discredit, or otherwise discourage the solution claimed” in the ’282 Patent. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004); *see also Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013) (“A reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not criticize, discredit, or otherwise discourage investigation into the invention claimed.”). Although Patent Owner argues that “the very

foundation” of Bergen’s teachings are “inconsistent” with the challenged claims, this assertion is conclusory and is not supported by sufficient explanation or supporting evidence. *See* Prelim. Resp. 36. In particular, Patent Owner does not explain why performing a “similarity query of the database to retrieve all data potentially satisfying the query” is “inconsistent” with the recited second video frame identifier or displaying information associated with the second identifier. *See id.*

Next, Patent Owner contends that Bergen’s teachings can be distinguished from claim 4 because Bergen teaches displaying information associated with locations *after* the request location. *See id.* at 37. This position, however, is not commensurate with the scope of claim 4. The claim does not include any language *precluding* the display of information associated with other, unclaimed video frame identifiers for locations after the request location. Thus, whether Bergen teaches “generating spoilers” of upcoming scenes or frames is irrelevant. *See id.*

Finally, Patent Owner argues Reimer fails to teach the “retrieving” and “displaying” limitations of claim 4, but acknowledges that Petitioner does not rely on Reimer for these limitations. *Id.* at 38–39. Thus, these arguments are inapposite. To the extent Patent Owner’s contention that “[m]odifying Bergen with Reimer would . . . impermissibly change the principle of operation of Bergen” refers to other limitations (discussed above) for which Petitioner does rely on Reimer, the contention is conclusory, insufficiently explained, and not supported by adequate evidence. *See id.* at 39.

For the reasons set forth above, we find Petitioner has shown sufficiently that the combination of Bergen and Reimer teaches each

limitation of claim 4, for purposes of this Decision. Thus, Petitioner has demonstrated a reasonable likelihood of proving that claim 4 is unpatentable as obvious over Bergen and Reimer.

b. Claims 14 and 19

Claim 14 is identical to claim 4, and claim 19 also is identical except that it does not recite that the first video frame identifier is retrieved “from a plurality of video frame identifiers.”⁹ Petitioner relies on the same arguments and evidence as advanced for claim 4 (Pet. 50), and Patent Owner does not present any additional arguments specific to these claims. For the same reasons discussed above for claim 4, we conclude Petitioner has demonstrated a reasonable likelihood of proving that claims 14 and 19 are unpatentable as obvious over Bergen and Reimer.

c. Claims 9, 12, and 16

Claim 9 is substantially the same as claim 4, except that it recites two additional limitations. First, claim 9 recites, “receiving from the user a request for additional information relating to the information associated with the first video frame identifier.” Second, claim 9 recites, “enabling a displaying of additional information in response to the request for additional information.” The Petition cites Bergen as teaching both of these limitations. Pet. 50–51.

As discussed above, Bergen discloses presenting video frames to a user in the form of a storyboard. Ex. 1028, 15:28–36, 20:23–31. Bergen

⁹ We note that claim 19, like claim 4, nonetheless recites retrieving both a first and a second video frame identifier, which constitutes a plurality of video frame identifiers.

further discloses that “[a]fter browsing the storyboard of the video series, the user may interactively request a more detailed description of the scene(s).” *Id.* at 20:34–38. The user can also “request similar scenes,” and “request to see the actual video of the entire scene, or a sequence of scenes.” *Id.* at 20:38–42. As such, Petitioner contends Bergen teaches the “request for additional information,” and enabling the display of that information, recited in claim 9. Patent Owner does not present any additional arguments specific to these claims.

On this record, we find that Petitioner has shown sufficiently that the combination of Bergen and Reimer teaches each limitation of claim 9, and, thus, that Petitioner has demonstrated a reasonable likelihood of proving that claim 9 is unpatentable as obvious over Bergen and Reimer.

Claim 12 depends from claim 9 and additionally recites, “pausing the playing in response to the request for information.” Petitioner argues that a person of ordinary skill would have recognized that presenting results of a request/query could interfere with viewing the video, and, thus, pausing the video would have been obvious given that it would have been “trivial” for the artisan to implement such a “ubiquitous” feature. Pet. 51–52 (citing Ex. 1002 ¶ 148). Additionally, the Petition cites Reimer as teaching this limitation. *Id.* at 52. Specifically, Petitioner notes that Reimer teaches using the “Pause” button of a remote control to initiate a query. *Id.* (citing Ex. 1005, 16:7–14). According to Petitioner, a skilled artisan would have been motivated to combine this feature of Reimer with Bergen because the two references are directed to similar systems, and doing so would constitute the use of a known technique (pausing) to improve Bergen’s system in the

same way it improves Reimer's system. *Id.* (citing Ex. 1002 ¶¶ 151–152; *KSR*, 550 U.S. at 417).

At this stage, we find that Petitioner has shown sufficiently that the combination of Bergen and Reimer teaches each limitation of claim 12. Thus, Petitioner has demonstrated a reasonable likelihood of proving that claim 12 is unpatentable as obvious over Bergen and Reimer.

Lastly, claim 16 is substantially the same as claim 9 except that (1) it does not recite that the first video frame identifier is retrieved “from a plurality of video frame identifiers,” and (2) the request for additional information relates to the *second* video frame identifier, rather than the first. The Petition relies on substantially the same arguments and evidence as for claim 9, which is persuasive for the same reasons discussed above for that claim. Thus, we conclude Petitioner has demonstrated a reasonable likelihood of proving that claim 16 is unpatentable as obvious over Bergen and Reimer as well.

4. *Obviousness Based on Bergen, Reimer, and Abecassis*

Petitioner asserts that claims 7, 8, and 18 would have been obvious over Bergen in view of Reimer and Abecassis. Pet. 54–58. Abecassis is directed to providing a “customized” version of a video to a viewer based on the viewer's content preferences. Ex. 1024, 2:30–35. The customized video is constructed based on assigning “content descriptors” to each segment of the video, and organizing the segments into a “video map.” *Id.* at 40–49.

a. *Claim 7*

Claim 7 is substantially the same as claim 12 except that it also recites, “resuming the playing at a beginning of a video clip that is

responsive to the request location.” Petitioner adds Abecassis to the combination of Bergen and Reimer, discussed above, to address this additional limitation. Pet. 54–56. Specifically, Abecassis discloses that the video map “identifies the beginning point of the segment in which the pause occurred, thus automatically identifying a suitable prior point in the video to restart the delivery of the video.” Ex. 1024, 5:6–10. Thus, in combination with the teachings discussed above with respect to the pausing limitation of similar claim 12, Petitioner argues Abecassis teaches resuming playing the video at the beginning of a video clip (i.e., a segment in Abecassis) that is responsive to the request location (i.e., where the user pressed pause to initiate a query, e.g., as in Reimer). *See* Pet. 54–55.

Petitioner advances several reasons why a person of ordinary skill would have been motivated to combine these teachings of Abecassis with those of Bergen and Reimer. *Id.* at 55–56. For example, Petitioner argues all three references disclose similar systems, and applying the resume feature of Abecassis would have been a simple substitution of a known technique for a similar technique in Bergen and Reimer (resuming from the pause location) to obtain predictable results with a reasonable expectation of success. *Id.* at 55 (citing Ex. 1002 ¶¶ 160–161). Additionally, Petitioner notes that Abecassis expressly discusses the advantages of its method, arguing that an ordinary artisan would have been motivated to capture that benefit. *Id.* (citing Ex. 1024, 5:6–12 (“By automatically replaying the segment in which the pause occurred, the viewer may re-engage the video without the loss of continuity.”)).

With respect to this asserted ground of unpatentability, Patent Owner relies solely on its arguments against the ground based only on Bergen and

Reimer, which are unpersuasive for the same reasons discussed above. *See* Prelim. Resp. 39. Based on the present record, we find that Petitioner has shown sufficiently that the combination of Bergen, Reimer, and Abecassis teaches each limitation of claim 7. Thus, Petitioner has demonstrated a reasonable likelihood of proving that claim 7 is unpatentable as obvious over Bergen, Reimer, and Abecassis.

b. Claim 8

Claim 8 is substantially the same as claim 7 except that the recited pausing is “in response to the request for additional information” (i.e., the second request) instead of the “request for information” (i.e., the first request). Petitioner identifies disclosures in Bergen that it contends teach this aspect of claim 8, and relies on the testimony of Dr. Bovik as to why a skilled artisan would have found it obvious in view of the asserted art. Pet. 56–57 (citing Ex. 1002 ¶¶ 166–167). Additionally, Petitioner asserts that “[i]t would have been obvious to pause the playing at the time of the second query for the same reasons that it would have been obvious to pause at the time of the first playing,” relying on the arguments and evidence it presented for claim 7. *Id.* at 57.

Patent Owner does not provide any arguments specific to claim 8. Based on the arguments and evidence presented at this stage of the case, we find that Petitioner has shown sufficiently that the combination of Bergen, Reimer, and Abecassis teaches each limitation of claim 8. Thus, Petitioner has demonstrated a reasonable likelihood of proving that claim 8 is unpatentable as obvious over Bergen, Reimer, and Abecassis.

c. Claim 18

Claim 18 depends from claim 16 and recites two additional limitations. First, similar to claims 7 and 8, claim 18 recites, “pausing the playing in response to the request for information.” Second, also similar to claims 7 and 8, claim 18 recites, “resuming . . . the playing at a beginning of a video clip that is responsive to the request location,” and specifies that the “resuming” occurs “following a termination of the displaying of additional information.” The Petition relies on essentially the same arguments and evidence as presented for claims 7 and 8. *See* Pet. 57–58.

Patent Owner does not provide any arguments specific to claim 18. On this record, we find that Petitioner has shown sufficiently that the combination of Bergen, Reimer, and Abecassis teaches each limitation of claim 18, and, thus, that Petitioner has demonstrated a reasonable likelihood of proving that claim 18 is unpatentable as obvious over Bergen, Reimer, and Abecassis.

5. Obviousness Based on Armstrong

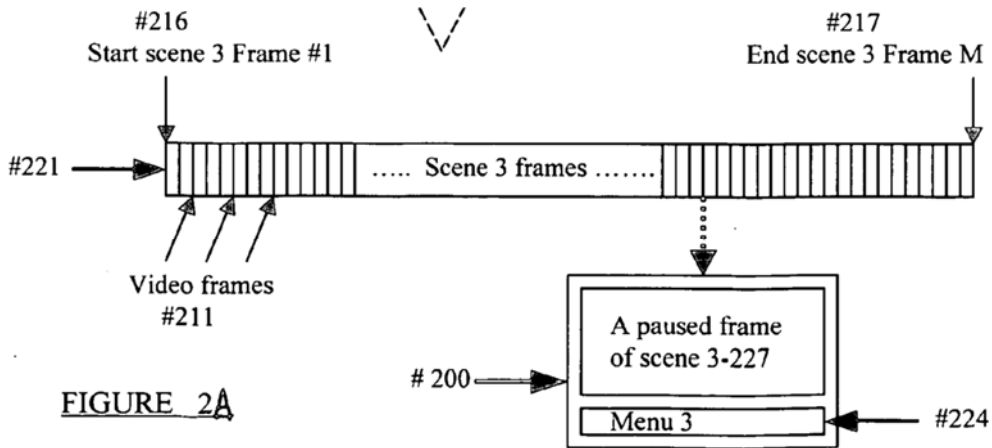
Petitioner asserts that claims 4, 9, 12, 14, 16, and 19 would have been obvious over Armstrong. Pet. 58–68. Armstrong relates to “allowing viewers of video content to access more information about specific items in a video segment.” Ex. 1021 ¶ [0015]. For example, a user may press the “pause” or “menu” button during a movie, which causes the last viewed frame to be displayed along with a “menu overlay” that provides options for obtaining further information. *Id.* ¶ [0019].

a. Claim 4

As to the “receiving . . . a request for information” limitation of claim 4, Petitioner cites Armstrong’s disclosure of a user pressing a “pause” or “menu” button during a video to access information about items in a video segment. Pet. 58 (citing Ex. 1021 ¶¶ [0018]–[0019], [0023]–[0024], [0045]–[0046], [0056]). Further, Petitioner cites Armstrong’s discussion of a “point of suspension” as teaching the “identifying a request location” limitation of claim 4. *Id.* at 59. Specifically, Armstrong describes that the “primary video content of a video source (e.g., a DVD) may be suspended at a point of suspension in time (or according to frame indexing, time frame indexing or GOP time code).” Ex. 1021 ¶ [0042].

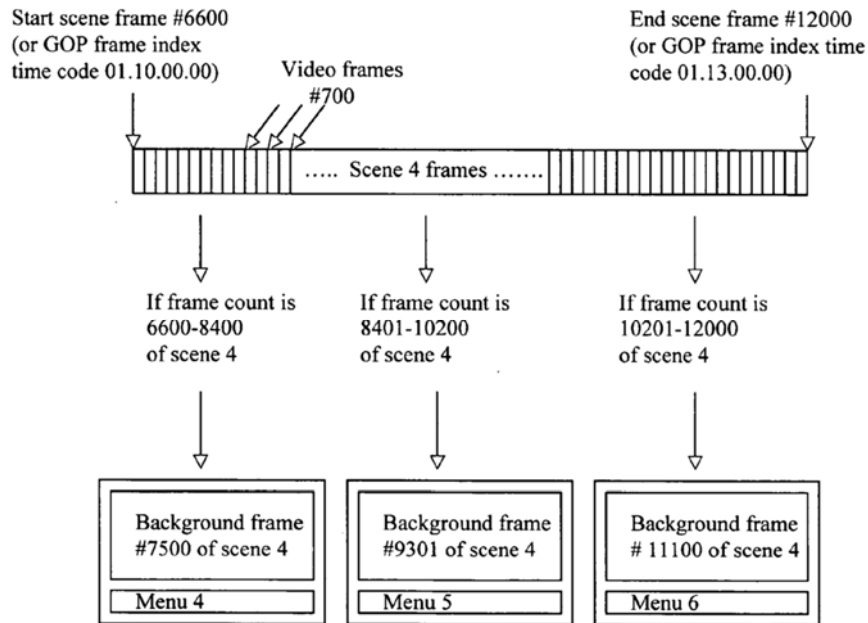
Patent Owner does not dispute, at this juncture, that Armstrong teaches either of these claim limitations. Based on the present record, we find for purposes of this Decision that Petitioner has shown sufficiently that Armstrong teaches both of these limitations.

With respect to respect to retrieving first and second video frame identifiers, as recited in claim 4, Petitioner relies on Armstrong’s disclosure of using frame numbers to access content indexed by frame. Pet. 59–64. For example, in an excerpt of Figure 2A reproduced below, Armstrong depicts a frame identifier according to Petitioner.



Ex. 1021, Fig. 2A (excerpt). The portion of Figure 2A above depicts a series of frames in “Scene 3” of a video. *Id.* Display 200 is shown as including paused frame 227 along with corresponding menu 224. *Id.* ¶ [0031].

Armstrong describes that if play of the video is suspended (i.e., a request is made) at a frame count within a particular range, a specific background frame also within that range is displayed along with a corresponding menu. *Id.* ¶ [0052]. This is illustrated in Figure 2B, reproduced below.



Id. at Fig. 2B. Figure 2B depicts a series of frames beginning at frame 6600 and ending in frame 12000. *Id.* ¶ [0052]. As shown, if a request is received when the frame counter is between frames 6600 and 8400, frame 7500 is shown as the “background frame” along with menu 4. *Id.* If instead the frame counter is between frames 8401 and 10200, frame 9301 is shown as the background frame along with corresponding menu 5. *Id.* The background frame for a group of frames may be “a frame pre-selected as a background frame close to and other than the current frame when play was suspended.” *Id.* ¶ [0056].

As further shown in Figure 3 (reproduced below), Armstrong discloses that the displayed frame and the displayed menu may be associated with different frame numbers.

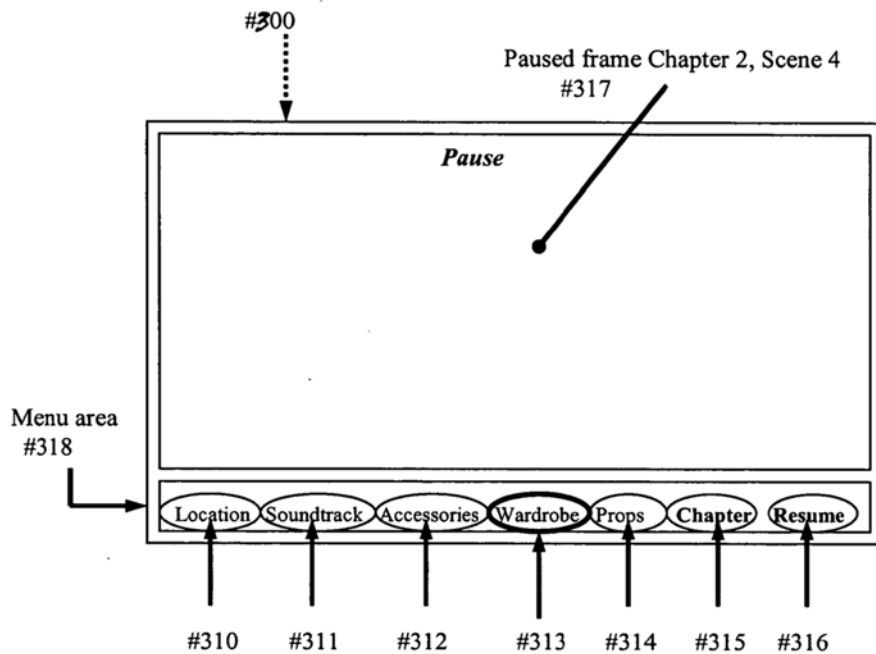


FIGURE 3

Ex. 1021, Fig. 3. Figure 3 depicts how a video screen may appear when the pause or menu button is pressed by the user according to the teachings of

Armstrong. *Id.* ¶ [0056]. Frame 317 may be “the last video frame,” such as “the scene where the video is paused (in this case [shown in Figure 3] for chapter 2, scene 4),” or it may be a “background frame.” *Id.* As discussed above, a background frame may be “a frame . . . close to and other than the current frame when play was suspended.” *Id.* Armstrong indicates, however, that the options shown in menu 318 change dynamically “on a per scene basis,” and they “are relevant to the content of the scene where the video is paused.” *Id.*

According to Petitioner, these disclosures teach the recited first video frame identifier because the frame number for the paused frame (with which menu 318 is associated) is responsive to the request location, i.e., the point of suspension where the video is paused. *See* Pet. 59–60, 62–63. Petitioner asserts the recited second video frame identifier is taught by the frame number for the background frame that is “close to and other than the current frame when play was suspended,” because that frame may be prior to the paused frame if, for example, the video was paused after the designated background frame but within the same group of frames, as shown in Figure 2B. *See id.* at 61–63 (quoting Ex. 1021 ¶ [0056]); Ex. 1021, Fig. 2B.

Petitioner further contends that Armstrong, thus, teaches the displaying of information associated with the first and second video frame identifiers, as recited in claim 4, as shown in Figure 3. Pet. 64–66. Specifically, Petitioner asserts that menu 318 is information associated with the first identifier (frame number for the paused frame). *Id.* For the recited information associated with the second identifier, the Petition cites frame 317, which may be a background frame—i.e., an image of the frame. *Id.* As shown in Figure 3, it appears both are displayed contemporaneously.

On this record, Petitioner’s contentions are persuasive. Patent Owner’s counterarguments are unpersuasive because they rely on conclusory assertions and unsupported attorney argument. For example, Patent Owner contends Petitioner relies on “nothing but hindsight,” but does not provide any explanation or evidentiary support. *See* Prelim. Resp. 40. Further, Patent Owner accuses Petitioner of “intentionally misrepresent[ing]” Armstrong’s disclosures, but after quoting the Petition and Armstrong, fails to explain why anything is inconsistent, much less intentionally misrepresented. *See id.* at 40–42. Finally, Patent Owner asserts the Petition “fails to cite anything in Armstrong that actually renders obvious the synergistic relationship” between certain limitations of claim 4, but does not identify what that “synergistic relationship” is or explain how it is required by the claim. *See id.* at 42–43.

Based on the arguments and evidence presented at this stage of the case, we find that Petitioner has shown sufficiently that Armstrong teaches each limitation of claim 4. Thus, Petitioner has demonstrated a reasonable likelihood of prevailing on its asserted ground of unpatentability that claim 4 would have been obvious over Armstrong.

b. Claims 14 and 19

As noted above, claim 14 is identical to claim 4, and claim 19 also is identical except that it does not recite that the first video frame identifier is retrieved “from a plurality of video frame identifiers.” Petitioner relies on the same arguments and evidence as advanced for claim 4 (Pet. 66), and Patent Owner does not present any additional arguments specific to these claims. For the same reasons discussed above for claim 4, we conclude

Petitioner has demonstrated a reasonable likelihood of proving that claims 14 and 19 are unpatentable as obvious over Armstrong.

c. Claims 9, 12, and 16

Claim 9 is substantially the same as claim 4, except that it further recites, “receiving from the user a request for additional information relating to the information associated with the first video frame identifier,” and, “enabling a displaying of additional information in response to the request for additional information.” Petitioner argues Armstrong teaches these limitations in its disclosures regarding the menu provided to the user that is associated with the scene where the video is paused. Pet. 66–67.

Specifically, Armstrong discloses that a user may select one of the options in menu 318 in Figure 3, such as “Wardrobe” button 313, which causes the display of text overlay 410 depicted in Figure 4. Ex. 1021 ¶ [0060]. The text of overlay 410 presents information about wardrobe items related to the current scene. *Id.* Thus, according to Petitioner, these disclosures teach the recited request for additional information (i.e., wardrobe information) and enabling the display of that information. Pet. 66–67.

Patent Owner does not present any additional arguments specific to these claims. On this record, we find that Petitioner has shown sufficiently that Armstrong teaches each limitation of claim 9, and, thus, that Petitioner has demonstrated a reasonable likelihood of proving that claim 9 is unpatentable as obvious over Armstrong.

Claim 12 depends from claim 9 and additionally recites, “pausing the playing in response to the request for information.” Petitioner identifies disclosures in Armstrong explaining that the user may request information by using the “pause” button, and accessing that information involves

pausing/suspending the video. Pet. 67. Patent Owner does not present any counterarguments for this claim at this juncture. Based on this evidence, we find that Petitioner has shown sufficiently that Armstrong teaches each limitation of claim 12. Thus, Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claim 12 would have been obvious over Armstrong.

Lastly, claim 16 is substantially the same as claim 9, except that (1) it does not recite that the first video frame identifier is retrieved “from a plurality of video frame identifiers,” and (2) the request for additional information relates to the *second* video frame identifier, rather than the first. As discussed above for claim 4, Petitioner has shown that Armstrong teaches retrieving both a first and a second video frame identifier; thus, the first identifier is retrieved from a plurality of identifiers. Further, the Petition cites Armstrong’s discussion of “hot spots” as teaching requesting additional information relating to the second identifier (i.e., relating to a frame prior to the current frame). Pet. 67–68. Armstrong describes using “hot spots” on a still image of a scene such that the hot spots are “certain items in the scene” whereby selecting one—such as a user selecting a depicted bottle or character in the scene—retrieves additional information about the item. Ex. 1021 ¶ [0024]. Patent Owner does not address this claim separately. We find Petitioner’s arguments persuasive and conclude the Petition has demonstrated a reasonable likelihood of proving that claim 16 is unpatentable as obvious over Armstrong.

6. *Obviousness Based on Armstrong and Abecassis*

Petitioner asserts that claim 7 would have been obvious over Armstrong in view of Abecassis. Pet. 69–71. Claim 7 is substantially the

same as claim 12 except that it also recites, “resuming the playing at a beginning of a video clip that is responsive to the request location.”

With respect to the teachings of Abecassis, the Petition relies on substantially the same contentions and evidence as for its asserted ground based on applying Abecassis to Bergen and Reimer. *See id.* (citing Ex. 1002 ¶¶ 210, 212, 214); *see also id.* at 38–53 (similar arguments for Bergen, Reimer, and Abecassis). These positions are persuasive for the same reasons discussed above for that asserted ground. In addition, Petitioner also notes that Armstrong discloses resuming a video “from the point of time of suspension, or at a point of time close to that point.” Ex. 1021 ¶ [0042]; Pet. 69. On this record, we are persuaded for purposes of this Decision that Petitioner has shown sufficiently that the combination of Armstrong and Abecassis teaches each of the limitations of claim 7. Thus, Petitioner has shown a reasonable likelihood of prevailing on this ground.

7. *Obviousness Based on McIntire and Dey, or McIntire, Dey, and Abecassis*

Petitioner asserts that claims 4, 9, 12, 14, 16, and 19 would have been obvious over McIntire in view of Dey, and that claims 7, 8, and 18 would have been obvious over McIntire in view of Dey and Abecassis. Pet. 12–38. McIntire relates to a method and apparatus for annotating media streams, such as television or online video. Ex. 1004 ¶¶ [0014]–[0015]. This annotation may be accomplished through “mapping [an] item of supplemental content to a segment identifier identifying a number of frames occurring after the segment in which the associated article appears.” *Id.* ¶ [0140]. This supplemental content is displayed in response to a signal from the viewer. *Id.* ¶ [0272], Fig. 8.

Dey relates to a process by which documents relating to portions of a “temporal document” are found “in response to a signal of interest at a particular time during the temporal document.” Ex. 1023, 4:8–21. Temporal documents may include “video or audio programming.” *Id.* at 2:7–9. Dey notes that “a user may not be able to instantaneously think about the changing material that is being presented, make a decision that he is interested, and give the required signal” to indicate that interest to the system. *Id.* at 7:27–30. Thus, the system of Dey adjusts to take into account the likely timeframe of the user’s interest. *See id.* at 7:36–8:9.

The central dispute between the parties is whether the asserted prior art teaches retrieving a second video frame identifier, and displaying information associated with that identifier, *contemporaneously* with the first identifier and its associated information. *See, e.g.*, Pet. 18–26, 28–29; Prelim. Resp. 19–31. Petitioner relies first on McIntire’s disclosure of identifying “one or more articles appearing in the media stream at *or around* the point in time at which” the user signal (request for information) was received. Ex. 1004 ¶ 310 (emphasis added). The system then “matches *one or more* segments [sic] identifiers identifying segments that correspond to viewer signals to the appropriate supplemental content.” *Id.* ¶ 311 (emphasis added). McIntire also notes that the user’s signal may be received at a later point than when the relevant article appeared in the media stream due to the user’s reaction time. *Id.* ¶ 272. To address this issue, McIntire describes mapping supplemental content to “a segment identifier identifying a number of frames occurring *after* the segment in which the associated article appears” to create a larger window of time in which the user may react. *Id.* ¶ 140 (emphasis added).

As Patent Owner argues, however, each of the challenged claims require that *both* the information associated with the first video frame identifier *and* the *different* information associated with the second identifier must be displayed *contemporaneously*. See Prelim. Resp. 29. Thus, on the present record, McIntire’s disclosure of mapping an item of supplemental content to one or more segment identifiers does not appear to meet the claim limitations because even if mapped to two different identifiers, both identifiers would lead to the same item of supplemental content.

Petitioner also relies on Dey, which indicates that “it is assumed that there is a delay between the material of interest first being presented to the user, and the indication of interest.” Ex. 1023, 7:40–42. According to Petitioner, Dey “solves the problem by retrieving supplemental content associated with the immediately preceding portion of video (e.g., 30 seconds prior to the request).” Pet. 21–22. While these disclosures explain how Dey describes identifying supplemental content associated with the user’s interest in a prior portion of the video (rather than the time the interest was indicated), it is unclear on this record how they teach retrieving and displaying *both* that content *and* the content associated with the time the interest was indicated *contemporaneously*, as recited in the challenged claims. Rather, these disclosures in Dey seem to teach retrieving and displaying the content of interest associated with the prior portion of the video *instead of* the content associated with the time the interest was indicated, which Dey indicates is not indicative of user interest. See Ex. 1023, 7:49–58.

We note, however, that if an *inter partes* review is instituted on any asserted ground, we are compelled to institute trial on all asserted grounds

based on Office policy in light of the Supreme Court’s decision in *SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348 (2018). See U.S. Patent & Trademark Office, Guidance on the Impact of SAS on AIA Trial Proceedings (Apr. 26, 2018) (“[I]f the PTAB institutes trial, the PTAB will institute on all challenges raised in the petition.”); see also 35 U.S.C. § 314(a) (requiring a showing of “a reasonable likelihood that the petitioner would prevail with respect to *at least 1 of the claims challenged*”) (emphasis added). Given that Petitioner has demonstrated a reasonable likelihood of prevailing on all other asserted grounds (as discussed above), which collectively cover all challenged claims, we conclude that the *inter partes* review must also be instituted as to these grounds based on McIntire and Dey (as well as Abecassis for some claims).

CONCLUSION

For the foregoing reasons and on the present record, we determine that the information presented in the Petition demonstrates there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 4, 7–9, 12, 14, 16, 18, and 19 of the ’282 Patent, and we institute an *inter partes* review of all challenged claims on all of the grounds of unpatentability raised in the Petition.

ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review of the challenged claims of the '282 Patent is authorized on each ground set forth in the Petition:

Claims 4, 9, 12, 14, 16, and 19 as unpatentable under 35 U.S.C.

§ 103(a) over Bergen and Reimer;

Claims 7, 8, and 18 as unpatentable under 35 U.S.C. § 103(a) over Bergen, Reimer, and Abecassis;

Claims 4, 9, 12, 14, 16, and 19 as unpatentable under 35 U.S.C.

§ 103(a) over McIntire and Dey;

Claims 7, 8, and 18 as unpatentable under 35 U.S.C. § 103(a) over McIntire, Dey, and Abecassis;

Claims 4, 9, 12, 14, 16, and 19 as unpatentable under 35 U.S.C.

§ 103(a) over Armstrong; and

Claim 7 as unpatentable under 35 U.S.C. § 103(a) over Armstrong and Abecassis;

FURTHER ORDERED pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial on the grounds of unpatentability authorized above; the trial commences on the entry date of this Decision.

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