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Paper 32
Entered: February 10, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FANDANGO MEDIA, LLC,
Petitioner,

v.

MAXELL, LTD.,
Patent Owner.

IPR2018-01432
Patent 9,384,783 B2

Before TERRENCE W. McMILLIN, JOHN A. HUDALLA, and JASON W. MELVIN, *Administrative Patent Judges*.

HUDALLA, *Administrative Patent Judge*.

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

Petitioner, Fandango Media, LLC ("Petitioner"), filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 2, 5, and 6 of U.S. Patent No. 9,384,783 B2 (Ex. 1001, "the '783 patent"). Patent Owner, Maxell, Ltd. ("Patent Owner"), filed a Preliminary Response (Paper 8, "Prelim. Resp."). Taking into account the arguments presented in Patent Owner's Preliminary Response, we determined that the information

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presented in the Petition established that there was a reasonable likelihood that Petitioner would prevail with respect to its unpatentability challenges. Pursuant to 35 U.S.C. § 314, we instituted this proceeding on February 13, 2019, as to all challenged claims and all grounds of unpatentability. Paper 9 ("Dec. on Inst.").

During the course of trial, Patent Owner filed a Patent Owner Response (Paper 17, "PO Resp."), and Petitioner filed a Reply to the Patent Owner Response (Paper 20, "Pet. Reply"). Patent Owner also filed a Sur-reply. Paper 21 ("PO Sur-reply"). An oral hearing was held on November 14, 2019, and a transcript of the hearing is included in the record. Paper 31 ("Tr.").

Petitioner filed a Declaration of Benjamin B. Bederson, Ph.D. (Ex. 1003) with its Petition. Patent Owner filed a declaration of Stuart Lipoff (Ex. 2002) with its Response. The parties also filed transcripts of the depositions of Dr. Bederson (Ex. 2005) and Mr. Lipoff (Ex. 1027).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 2, 5, and 6 of the '783 patent. For the reasons discussed below, Petitioner has demonstrated by a preponderance of the evidence that claims 2, 5, and 6 of the '783 patent are unpatentable.

I. BACKGROUND

A. Real-Parties-in-Interest

Petitioner identifies Fandango Media, LLC, NBCUniversal Fandango Holdings, LLC, NBCUniversal Media, LLC, and Comcast Corporation as

real-parties-in-interest. Pet. 3; Paper 15, 2; Paper 27, 2. Patent Owner identifies Maxell, Ltd., as the real-party-in-interest. Paper 4, 1.

B. Related Proceedings

The parties identify the following proceeding related to the ’783 patent (Pet. 4; Paper 4, 1; Paper 15, 2–3; Paper 27, 2–3):

Maxell, Ltd. v. Fandango Media, LLC, No. 2:2017-cv-7534 (C.D. Cal. filed Oct. 13, 2017).

In addition, Petitioner notes that it filed a petition for *inter partes* review in IPR2018-01434 against U.S. Patent No. 7,515,810 B2, which also is owned by Patent Owner. Pet. 4; Paper 15, 2–3; Paper 27, 2–3. We denied institution in that case.

C. The ’783 patent

The ’783 patent relates to a device with a recording medium for recording and reproducing audio and video data (AV data) in which the user can select and manage arbitrary play lists. Ex. 1001, 1:22–24, 1:48–52, 2:33–35. Management information for managing the data is generated and recorded together onto the same recording medium as AV data. *Id.* at 1:36–39. Figure 1 of the ’783 patent is reproduced below.

FIG.1

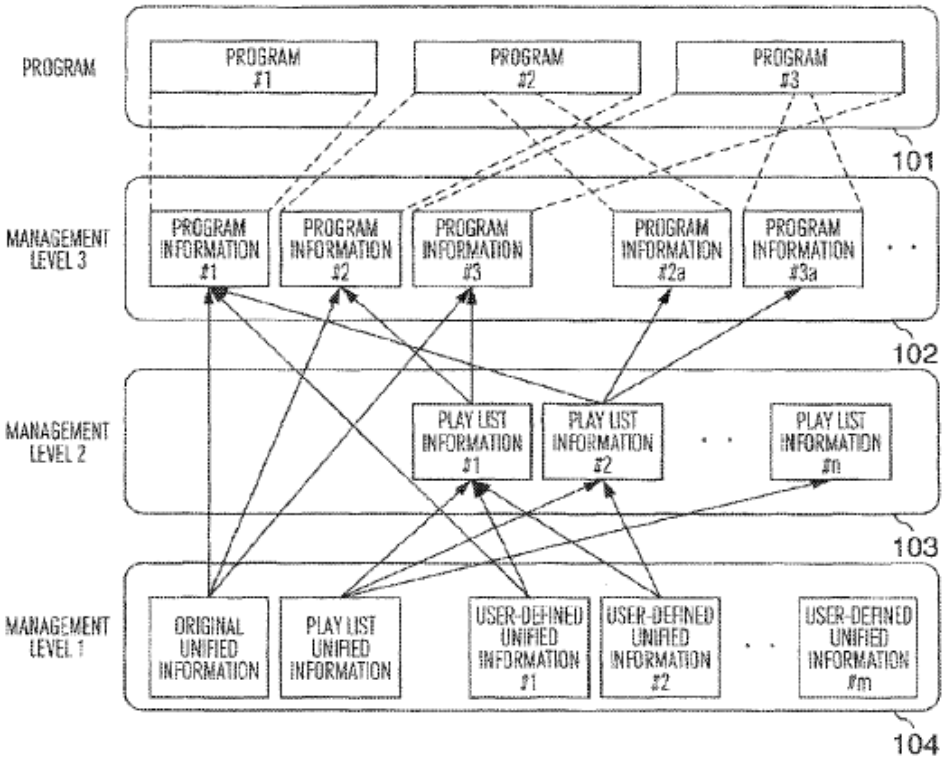


Figure 1 depicts a management state of AV data on a recording medium in an exemplary recording and reproducing device. *Id.* at 3:32–35. Reference numeral 101 designates AV data, and each of Program #1 to Program #3 is a recording unit. *Id.* at 3:35–38.

Reference numeral 102 designates a third management hierarchical level (Management Level 3), wherein Program Information #1 to Program Information #3 indicate the whole reproduction ranges of recording units, i.e., Program #1 to Program #3, respectively. *Id.* at 3:42–44. Management Level 3 also includes Program Information #2a to Program Information #3a, each of which indicates a reproduction range of the whole or a part of a program arbitrarily specified by the user. *Id.* at 3:44–49.

Reference numeral 103 designates a second management hierarchical level (Management Level 2), which includes Play List Information #1 to Play List Information #n. *Id.* at 3:56–60. Each play list information indicates a reproduction sequence of arbitrary program information pieces in Management Level 3. *Id.* at 3:60–62.

Reference numeral 104 designates a first management hierarchical level (Management Level 1) including a plurality of unified information pieces. *Id.* at 3:64–4:1. Original Unified Information contains Program Information #1 to Program Information #3 on Management Level 3. *Id.* at 4:1–5. Play List Unified Information contains Play List Information #1 to Play List Information #n on Management Level 2. *Id.* 4:8–10. User-Defined Unified Information #1 to User-Defined Unified Information #m contain one or more from among play list information pieces on Management Level 2 and program information pieces on Management Level 3. *Id.* at 4:14–18.

Figures 6 and 7 of the ’783 patent are reproduced below.

FIG.6

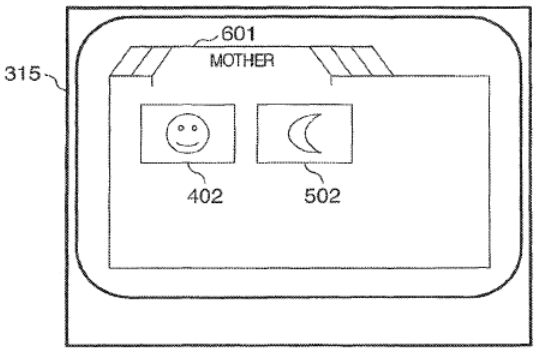
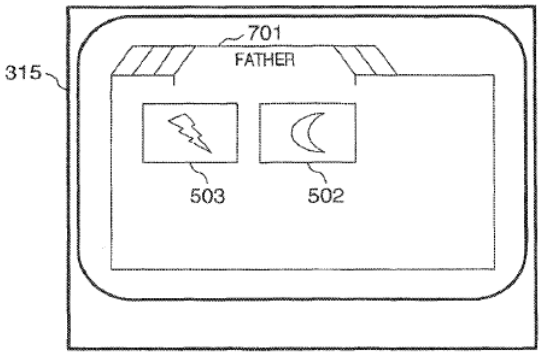


FIG.7



Figures 6 and 7 depict output menu displays on TV set 315 utilizing User-Defined Unified Information #1 and User-Defined Unified Information #2, respectively. *Id.* at 3:9–12, 5:65–67, 6:7–11. Menu display tag 601 is related to user #1 (“Mother”) in Figure 6, whereas menu display tag 701 is

related to user #2 ("Father") in Figure 7. *Id.* at 5:65–6:1, 6:7–11. Thumbnails 402 and 502 in Figure 6 indicate Program Information #1 and Play List Information #1, respectively. *Id.* at 6:2–4. Thumbnails 503 and 502 in Figure 7 indicate Play List Information #2 and Play List Information #1, respectively. *Id.* at 6:11–14.

The '783 patent claims priority to three Japanese patent applications dating to as early as December 2, 2004. *Id.*, code (30). As discussed below, Petitioner establishes that, at a minimum, its asserted references qualify as prior art relative to the December 2, 2004, date of the earliest Japanese patent application (i.e., the earliest possible effective filing date).

D. Illustrative Claim

Of the challenged claims, only claim 2 is independent. Claims 5 and 6 depend from claim 2. Claim 2 is illustrative of the challenged claims and recites:

> 2. A method comprising:
>
> reproducing selected video information from among a plurality of video information recorded on a recording medium by the recording unit,
>
> displaying, on a display device, a user interface for a user to select desired video information to be reproduced from among the plurality of video information recorded on the recording medium by the recording unit;
>
> reproducing the selected video information read out from the recording medium, wherein a first area and a second area are displayed within a menu display,
>
> wherein the first area is configured to display at least first indication associated with a first group of video information for a first classification and second indication associated with a

> second group of video information for a second classification different from the first classification, and
>
> wherein the second area is configured to display thumbnails corresponding to video information recorded on the recording medium by the recording unit;
>
> wherein, when the first indication shown in the first area is selected, displaying, in the second area, a first group of thumbnails corresponding to the first group of video information;
>
> wherein, when the second indication shown in the first area is selected, displaying, in the second area, a second group of thumbnails corresponding to the second group of video information,
>
> wherein, even if one video information recorded on the recording medium included in both the first group of video information and the second group of video information is deleted from the first group of video information, the one video information continue to be included in the second group of video information.

Ex. 1001, 8:55–9:20.

E. Prior Art

Petitioner relies on the following prior art:

U.S. Patent Application Publication No. 2001/0056434 A1, filed Mar. 29, 2001, published Dec. 27, 2001 (Ex. 1004, "Kaplan"); and

U.S. Patent Application Publication No. 2004/0201691 A1, filed Apr. 11, 2003, published Oct. 14, 2004 (Ex. 1005, "Bryant").

F. The Instituted Grounds

We instituted *inter partes* review of claims 2, 5, and 6 of the ’783 patent on the following grounds (Dec. on Inst. 32), which are all the grounds presented in the Petition (Pet. 5):

Claims Challenged	35 U.S.C. §	Reference(s)
2, 5, 6	103(a)[1]	Kaplan, Bryant
2, 5, 6	103(a)	Bryant, Kaplan
2, 5, 6	103(a)	Kaplan
2, 5, 6	103(a)	Bryant

II. ANALYSIS

A. Legal Standards

A 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. *See 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) where in evidence, so-called secondary

[1] The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the effective filing date of the ’783 patent is before March 16, 2013 (the effective date of the relevant amendment), the pre-AIA version of § 103 applies.

considerations.[2] *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be "considered together with the knowledge of one of ordinary skill in the pertinent art." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (quoting *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)). We analyze Petitioner's obviousness grounds with the principles identified above in mind.

B. Level of Ordinary Skill in the Art

In the Decision on Institution, we determined that a person of ordinary skill in the art would have had a bachelor's degree in Computer Science, Electrical Engineering, Computer Engineering, or a related field, and two years of practical experience in digital data management. Dec. on Inst. 7–8 (citing Ex. 1001, 1:22–24, 1:36–39; Ex. 1003 ¶ 69). Neither party disputes our determination. *Cf.* Ex. 2002 ¶ 29 (Mr. Lipoff applying our definition). We discern no reason to change our determination and apply it for purposes of this Decision.

C. Claim Interpretation

Because this *inter partes* review is based on a petition filed before November 13, 2018,[3] we construe the claims by applying the broadest

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[2] Patent Owner does not put forth any evidence of secondary considerations of nonobviousness.

[3] On October 11, 2018, the USPTO revised its rules to harmonize the Board's claim construction standard with that used in federal district court. Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (codified at 37 C.F.R. 42.100(b) (2019)). This rule change

reasonable interpretation in light of the specification. 37 C.F.R. § 42.100(b) (2018); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under the broadest reasonable interpretation standard, and absent any special definitions, claim terms are given their ordinary and customary meaning, as would have been understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech. Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definitions for claim terms or phrases must be set forth "with reasonable clarity, deliberateness, and precision." *Paulsen*, 30 F.3d at 1480.

Petitioner puts forth several terms for construction. Pet. 13–17. Patent Owner responded to Petitioner's proposed constructions in its Preliminary Response. Prelim. Resp. 9–12. In our Decision on Institution, we determined that no terms required explicit construction. Dec. on Inst. 9 (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). After institution, Patent Owner provided no express response to either Petitioner's proposed terms or our determination not to construe any terms in the Decision on Institution. *See* Tr. 25:8–11 (Patent Owner's counsel conceding that it did not include a claim construction section in its post-institution papers). Notwithstanding, Patent Owner makes arguments related to the final limitation in claim 2, i.e., limitation 2.9[4], that compel us to interpret certain aspects of that limitation, as set forth below.

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applies only to petitions filed after November 13, 2018, however. Thus, the revised claim construction standard does not apply to this proceeding. *Id*.

[4] Both parties have adopted Petitioner's numbering convention for claim limitations, which is set forth at pages 9–11 of the Petition. Limitation 2.9 recites: "wherein, even if one video information recorded on the recording medium included in both the first group of video information and the second

First, we consider the usage of the singular "one" in "one video information." Limitation 2.9 requires that the "one video information" is "recorded on the recording medium" and "continue[s] to be included in the second group of video information" even if is "is deleted from the first group of video information." At oral argument, Patent Owner's counsel argued that "one video information" could refer to separate copies of the same video information that are included in the first and second groups. *See* Tr. 29:1–6 (Patent Owner's counsel arguing that one video information could be included in two different groups "[b]y having multiple copies of the video information"); 32:13–14 (Patent Owner's counsel stating that "[o]ur view is that there would be multiple copies of video information"). Thus, under Patent Owner's view, each instance of the "one video information" included in a group would require a separate copy of that "one video information" to be recorded on the recording medium.

We do not agree with Patent Owner's argument. Importantly, this limitation uses the article "one" to refer to "one video information," and the subsequent reference recites "*the* one video information" (emphasis added). The plain usage of these words implies that the same "one video information" is initially included in each group, contrary to Patent Owner's argument. Similarly, Patent Owner's supposition about multiple copies of the same underlying data is logically inconsistent with limitation 2.9. Specifically, if different copies of video information existed in the first and second groups, then the "one video information" deleted from the first group

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group of video information is deleted from the first group of video information, the one video information continue to be included in the second group of video information." Ex. 1001, 9:16–21.

could not "continue to be included in the second group," because there would be different video information in the second group.

The specification of the '783 patent also contradicts Patent Owner's interpretation. In particular, the '783 patent is directed to unified management of AV data where users can share a single recording medium. Ex. 1001, 2:47–55. Importantly, the exemplary unified management scheme in Figure 1 of the '783 patent, which is reproduced below, depicts management information for different users referring to the same video information.

FIG.1

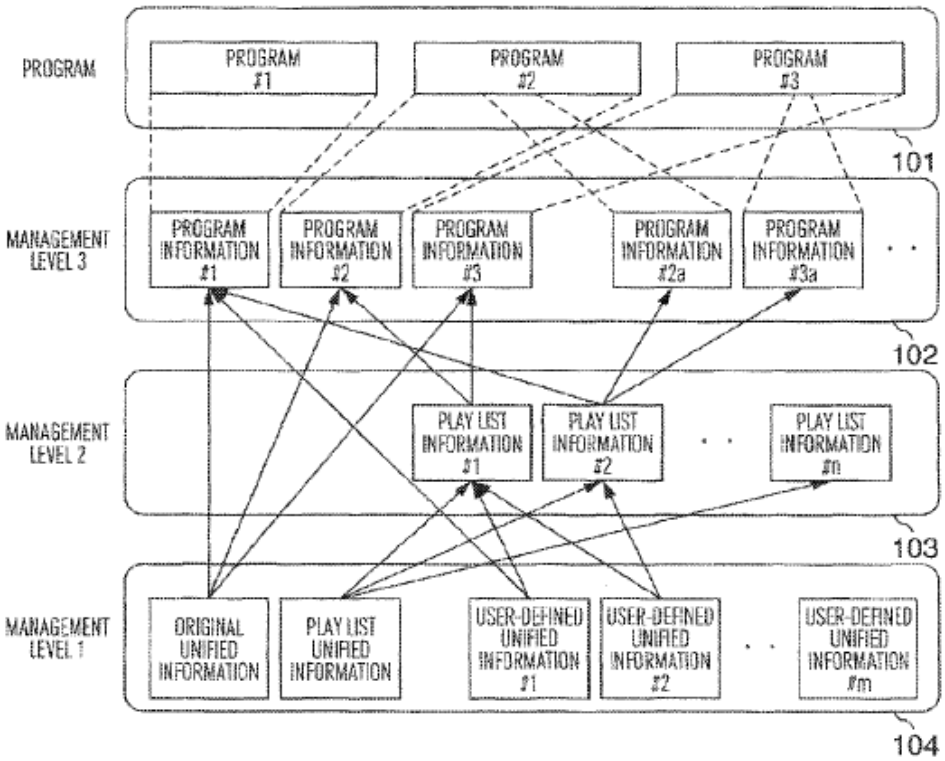


Figure 1 depicts a management state of AV data on a recording medium in an exemplary recording and reproducing device. Ex. 1001, 3:32–35. The specification of the '783 patent describes an example of user-defined unified

information for a "mother" and a "father" with reference to Figure 1. *Id.* at 5:65–6:18. In that example, user-defined unified information #1 (for "mother") refers to program information #1 and play list information #1. *Id.* at 5:65–6:4. User-defined unified information #2 (for "father") refers to play list information #2 and play list information #1. *Id.* at 6:7–14. As can be seen, each of the mother's and the father's unified information refers to play list information #1, which in turn refers to the same program information #1 and #2, i.e., "the whole reproduction ranges" of programs #1 and #2. *See id.* at 3:42–44. Further in turn, program information #1 and #2 refer to the underlying AV data on the recording medium for programs #1 and #2, respectively. *See id.* at 3:35–38. As such, two users' groups (i.e., user-defined unified information for "mother" and "father") ultimately refer to the same "one video information" (e.g., underlying AV data for program #1).

Given this background in the specification, and in light of the plain usage of the words in this limitation, we determine that the "one video information" included in the first group and the second group is the same "one video information," not merely copies thereof.

Next, we consider the usage of "deleted" in the phrase "one video information . . . is deleted from the first group of video information." Certain of Patent Owner's arguments would require that the underlying video information itself is deleted. *See, e.g.*, PO Resp. 9 (characterizing the claim limitation as "deleting recorded information in one location while keeping the information in another location"); PO Sur-reply 11–12 (distinguishing Bryant because it does not teach deletion of video information); Tr. 27:18–19 (Patent Owner's counsel arguing "it's specific in

the ’783 Patent that the underlying data -- the video data here -- is being deleted”). Nevertheless, after considering the intrinsic evidence, we do not agree with Patent Owner’s interpretation.

Looking at the usage in the claim limitation itself, we note that the deletion is “from the first group of video information.” This implies that the deletion may relate to group membership, rather than to the underlying video data themselves. Such an interpretation is consistent with the only instances of the word “delete” in the specification of the ’783 patent. Those instances pertain to the examples of Figures 6 and 7 where, respectively, a “‘mother’ can use the menu display tag for mother 601 as a folder dedicated to herself” and a “‘father’ can use the menu display tag for father 701 as a folder dedicated to himself.” Ex. 1001, 6:4–7, 6:16–18. For each folder, the mother and father can “freely *register and delete* data to be reproduced.” *Id.* (emphasis added); *see also id.* at 6:26–31 (“The user-defined unified information is formed to allow arbitrary reproduction ranges contained on a lower hierarchical level to be *registered* therein. As a result, it becomes possible for the user to select arbitrary play lists or reproduction ranges and conduct management.” (emphasis added)). Thus, deleting data from the folder may be interpreted as the opposite action from registering such data to the folder. Such an interpretation also is consistent with the language of limitation 2.9 itself, because deletion from a group is contrasted with inclusion in a group. *See id.* at 9:16–21 (“even if one video information . . . is *deleted* from the first group of video information, the one video information continue to be *included* in the second group of video information” (emphases added)). Thus, under the broadest reasonable interpretation standard, we determine that “delet[ing]” video information

from the first group includes reversing a registration (i.e., unregistering) of video information from the first group. *See id.* at 6:4–7, 6:16–18, 6:26–31. For similar reasons, we also determine that "delet[ing]" video information from a group does not necessarily require deleting underlying AV data.

Finally, we note that Patent Owner's claim construction arguments for limitation 2.9 are allegedly rooted in its contention that we should adopt Petitioner's proposed construction (Pet. 14) of "video information" as "video data represented by digital or analog signal." *See* PO Sur-reply 6 (citing Pet. 14); Tr. 35:12–18. Nevertheless, no construction of "video information" is necessary to resolve the parties' disputes.[5] *See, e.g.*, *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy' . . . ." (quoting *Vivid*, 200 F.3d at 803)). As such, we decline to construe "video information," and we likewise determine that no other terms require explicit construction

D. Obviousness Ground Based on Kaplan and Bryant

Petitioner contends the subject matter of claims 2, 5, and 6 would have been obvious over the combination of Kaplan and Bryant. Pet. 28–79; Pet. Reply 3–17. Patent Owner disputes Petitioner's contentions. PO Resp. 28–51; PO Sur-reply 1–15.

[5] Indeed, our disposition below would not change even if we were to adopt Petitioner's construction of "video information."

1. Kaplan

Kaplan is a U.S. patent application publication directed to "a multimedia management system for storing, manipulating, and displaying multimedia content." Ex. 1004 ¶ 4. To facilitate the storage and subsequent retrieval of multimedia data files, the system includes a user interface with a plurality of predefined functions to uniquely index multimedia files, create an index database file, and create visual representations of the files for later retrieval. *Id.* ¶ 44. The indexed file stores a pointer in a management system database to a physical file location, while providing a thumbnail image that can be used to represent the file in the user interface. *Id.* Multiple pointers in the database may be related to a single physical file stored on computer media, so there is no need to store multiple physical files of the same multimedia data. *Id.*

Figure 4 of Kaplan is reproduced below.

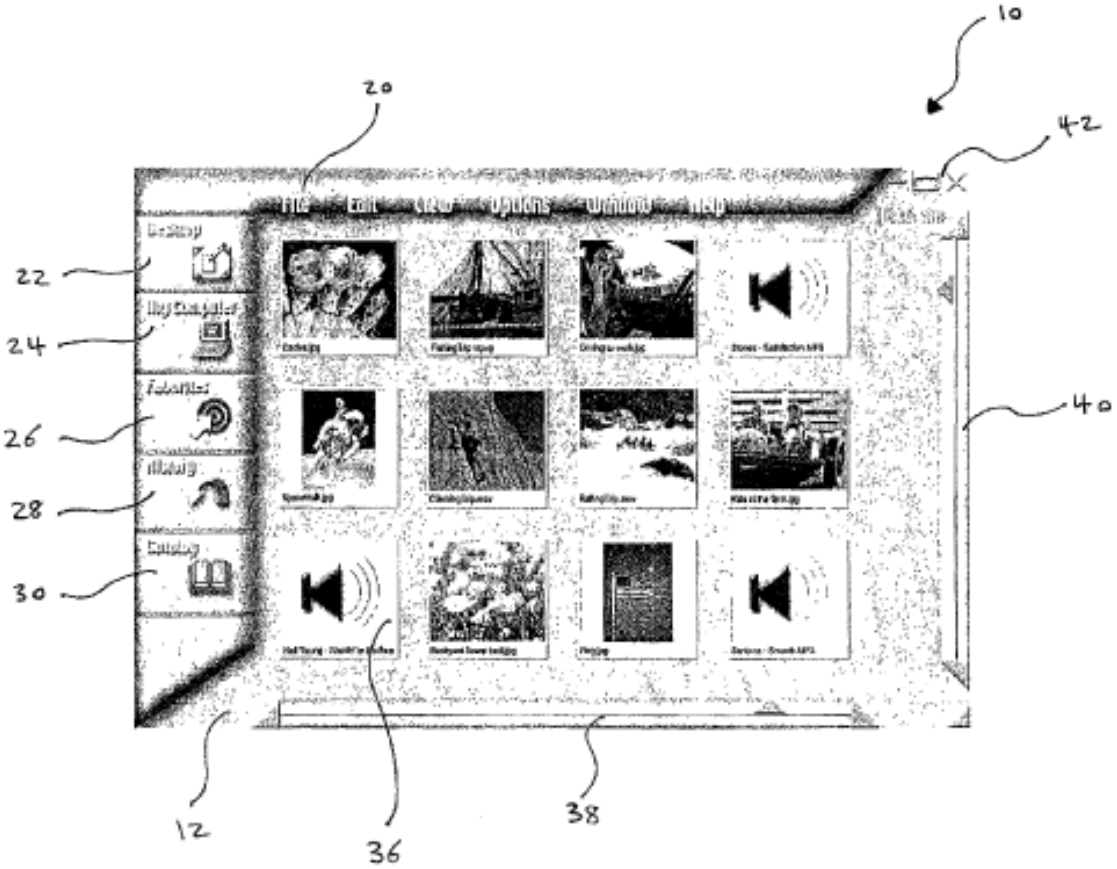


FIG.-4

Figure 4 is a graphical representation of control options available to a user via interface 12 that can be displayed on a "monitor or TV." *Id.* ¶¶ 14, 39. Functions associated with user interface 12 may be carried out via control buttons for various primary options in user interface 12, including Desktop 22, My Computer 24, Favorites 26, History 28, and Catalog 30. *Id.* ¶¶ 39–40. For example, users may store their favorite multimedia content by way of the Favorites 26 primary option. *Id.* ¶ 42. All information and multimedia content is displayed through thumbnails 36, which are small image representations of larger images. *Id.* ¶ 40. A user may click on thumbnails to view and/or listen to multimedia content. *Id.* ¶ 50. Playback

may occur within the thumbnail itself, in a partial screen mode, or in a full screen mode. *Id.* ¶ 51.

Petitioner contends Kaplan qualifies as prior art under 35 U.S.C. § 102(b) based on its publication date of December 27, 2001. Pet. 21 n.3. We agree. Kaplan's publication date of December 27, 2001, is more than one year before the earliest possible effective filing date of the challenged claims, which is December 2, 2004. Ex. 1001, code (30); Ex. 1004, code (43).

2. Bryant

Bryant is a U.S. patent application publication directed to "grouping and classifying digital still images and digital motion images captured using a handheld digital camera." Ex. 1005 ¶ 29. Grouping and classification data are stored in a database on a host computer. *Id.* The classification provides "affective information," which is information that relates to the feelings or emotions of a person toward images. *Id.* ¶ 30. An example of affective information is the level of importance a user associates with an image, such as whether the image is a "favorite." *Id.*

Figure 8 of Bryant is reproduced below.

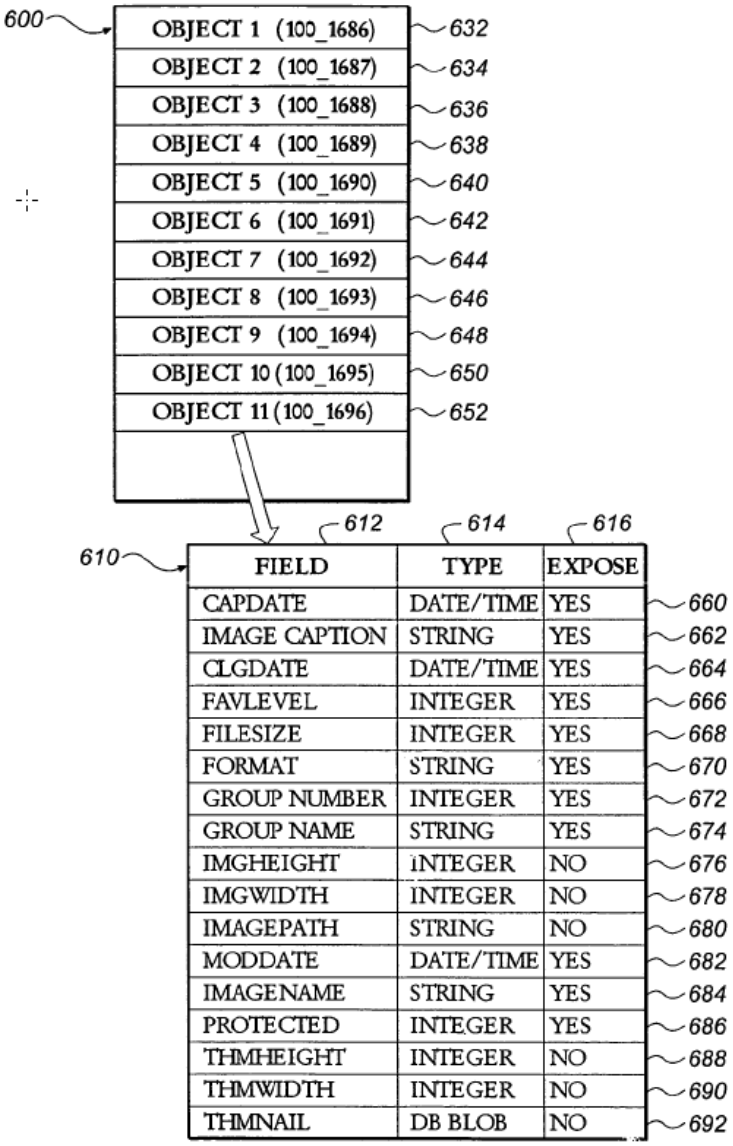


FIG. 8

Figure 8 depicts database information including general assets table 600 that includes image data objects 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, and 652 corresponding to various transferred image files (e.g., "100_1686"). *Id.* ¶ 82. For example, object 11 (100_1696) 652 includes table of data fields 610, and each row 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, and 692 of table 610 includes a

particular type of metadata describing the image. Among the rows of table 610 are "favlevel" metadata in row 666, which indicates whether the user has selected the image as a favorite; "group number" metadata in row 672, which indicates the number of the group of images of which the image is a part; "group name" metadata in row 674, which indicates an optional name for the group; and "thmnail" metadata in row 692, which holds a copy of the compressed thumbnail image as stored by the digital camera. *Id.* ¶¶ 84, 85, 87.

Figure 9A of Bryant is reproduced below.

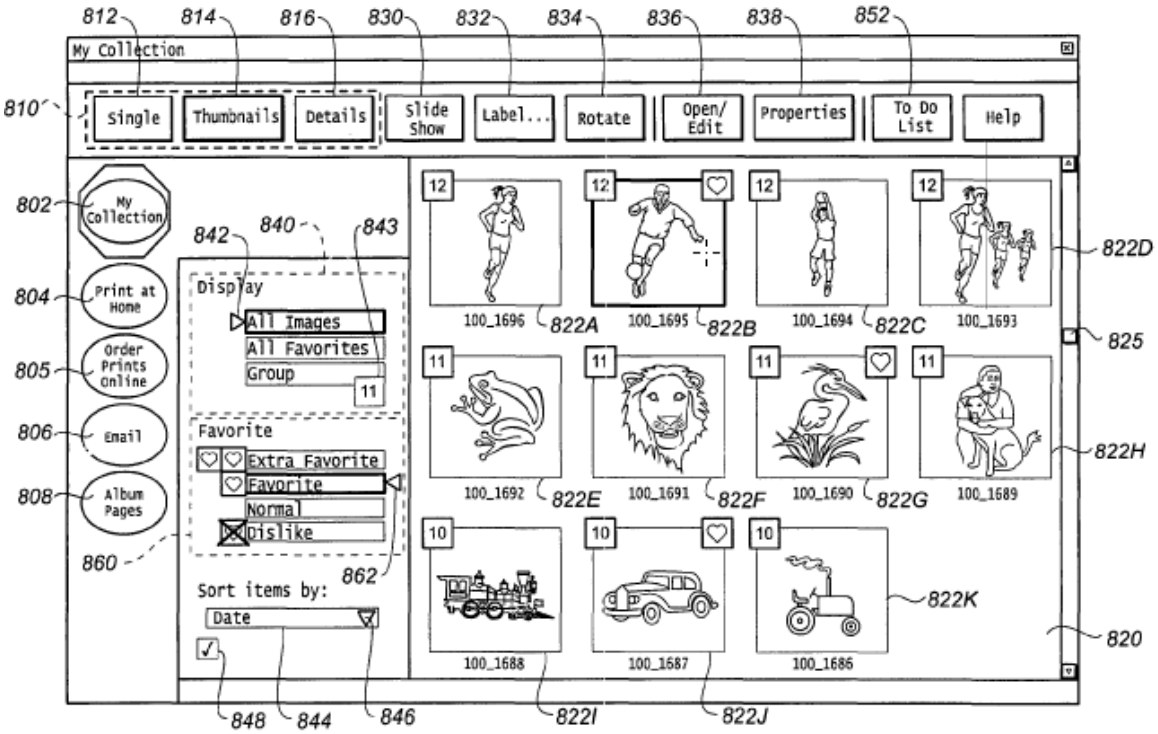


FIG. 9A

Figure 9A depicts an example of a computer user interface screen for displaying all of the transferred images. *Id.* ¶ 89. The user interface screen includes area 820 for displaying the thumbnail images provided using "thmnail" metadata 692 of each object from general assets table 600. *Id.* By moving selector 842 within display selection area 840, the user can select

among the display of "All Images," "All Favorites," or "Group" based on group number/name box 843. *Id.* The user also can change the level of a selected image to be an "Extra Favorite," a "Favorite," a "Normal," or a "Dislike" image using selector 862 in favorites level selection area 860. *Id.* ¶ 96.

Petitioner contends, *inter alia*, that Bryant qualifies as prior art under 35 U.S.C. § 102(e) based on its filing date of April 11, 2003. Pet. 24 n.4. We agree. Bryant's filing date of April 11, 2003, is before the earliest possible effective filing date of the challenged claims, which is December 2, 2004. Ex. 1001, code (30); Ex. 1005, code (22).

3. Claim 2

a. Preamble

The preamble of claim 2 recites merely "[a] method comprising." Ex. 1001, 8:55. We do not consider the preamble limiting. *See Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002) ("Generally, the preamble does not limit the claims."). The parties do not contend otherwise.

b. Limitation 2.1

Claim 2 further recites "reproducing selected video information from among a plurality of video information recorded on a recording medium by the recording unit" ("limitation 2.1"). Ex. 1001, 8:56–58. Petitioner cites Kaplan's "multimedia management system for storing, manipulating, and displaying multimedia content" on a computer for teaching "reproducing selected video information." Pet. 29 (quoting Ex. 1004 ¶ 4; citing Ex. 1004

¶¶ 34, 37, 38, 68, 69). Petitioner notes that Kaplan discloses "hard disks" and other storage media for the recited "recording medium." *Id.* (citing Ex. 1004 ¶ 34, claim 7).

Petitioner also contends an ordinarily skilled artisan "would have understood that Bryant suggests reproducing selected video information from the recording medium." Pet. 52 (citing Ex. 1003 ¶ 147). Specifically, Petitioner cites Bryant's teachings of "capturing 'motion video images' with a camera and loading them onto a home computer" and contends an ordinarily skilled artisan "would have recognized that a reason to transfer a video to a user's computer is to reproduce (e.g., playback) the video from the recording medium when the user wants to watch it." *Id.* (citing Ex. 1003 ¶ 147; Ex. 1005 ¶¶ 36–38, 80–81). In addition, Dr. Bederson testifies that an ordinarily skilled artisan reading Bryant's disclosures on "digital motion images" would have understood that Bryant's disclosure of "images" encompasses videos. Ex. 1003 ¶ 149 (citing Ex. 1005 ¶¶ 29, 36). Petitioner also contends ordinarily skilled artisans would have been motivated to incorporate video playback into Bryant. *Id.* at 53 (citing Ex. 1003 ¶ 151).

Patent Owner does not dispute that Kaplan discloses limitation 2.1. Nonetheless, Patent Owner argues "Bryant does not disclose, explicitly or inherently, reproducing (e.g., playback) of stored video information as required by elements [2.1]-[2.3]." PO Resp. 35 (citing, *inter alia*, Ex. 2002 ¶ 107); *see also* PO Sur-reply 5–11.

We are persuaded by Petitioner's unrebutted evidence that Kaplan discloses video reproduction capability. *See* Ex. 1004 ¶¶ 34, 37, 38, 68, 69. Although this evidence alone is sufficient to support Petitioner's obviousness analysis for limitation 2.1, we also find that Bryant at least

suggests video reproduction, as we articulated in our Institution Decision. *See* Dec. on Inst. 26 (citing Ex. 1005 ¶¶ 3, 29, 36). In particular, Bryant states that digital image files captured by a digital camera "can then be *viewed*, stored, retrieved, and printed using a home computer." Ex. 1005 ¶ 3 (emphasis added). Bryant also states that its disclosure pertains to "digital still images and *digital motion images* captured using a handheld digital camera." *Id.* ¶ 29 (emphasis added). Patent Owner's arguments about Bryant's greater focus on still images and standards for still images (*see* PO Resp. 35–40; PO Sur-reply 5–7) does not negate the fact that Bryant mentions manipulation (including viewing) of video files from a digital camera. *See* Ex. 1005 ¶¶ 3, 29, 36; *see also* Ex. 1003 ¶ 149 (Dr. Bederson's persuasive testimony on an ordinarily skilled artisan's interpretation of Bryant, which is consistent with Bryant itself).

Based on Petitioner's evidence, we find that the combination of Kaplan and Bryant teaches limitation 2.1.

c. Limitation 2.2

Claim 2 further recites "displaying, on a display device, a user interface for a user to select desired video information to be reproduced from among the plurality of video information recorded on the recording medium by the recording unit" ("limitation 2.2"). Ex. 1001, 8:59–62. Petitioner cites Kaplan's user interface 12 and contends the interface "allows a user to select videos to be played back from the computer." Pet. 32 (citing Ex. 1004 ¶¶ 39, 40, 50, 51, 57, Figs. 7–12, 14, 16). Petitioner notes that Kaplan discloses a "monitor or TV" for the recited "display device." *Id.* (citing Ex. 1004 ¶ 39).

Petitioner also cites Bryant's "user interface screens" such as those in Figures 9A–9C of Bryant. *Id.* at 55–56. Petitioner contends these user interfaces "facilitate user selection of desired video information to be played back from the recording medium (*e.g.*, hard drive) by the recording unit (*e.g.*, computer)." *Id.* (citing Ex. 1003 ¶ 154; Ex. 1005 ¶¶ 29, 36–37, 88–90). Petitioner maps the recited "display device" of claim 2 to Bryant's display monitor 14. *Id.* at 54 (citing Ex. 1005 ¶¶ 37, 38).

Patent Owner does not dispute Petitioner's analysis relative to Kaplan. We are persuaded by Petitioner's unrebutted evidence that Kaplan teaches displaying a user interface (i.e., user interface 12) on a display device (i.e., a "monitor or TV") for selecting desired video information (e.g., "Play in Place" feature for multimedia content). *See* Ex. 1004 ¶¶ 39, 40, 50, 51, 57, Figs. 7–12, 14, 16. Patent Owner asserts the same arguments against Bryant not disclosing video reproduction capability, which we discussed above. *See supra* § II.D.3.b. Despite these arguments, Bryant teaches user interfaces in Figures 9A–9C from which a user may select and display images. *See* Ex. 1005 ¶¶ 88–90, Figs. 9A–9C. Bryant also discloses display monitor 14, which is commensurate with the recited "display device." *See id.* ¶ 38, Fig. 1. Based on Petitioner's evidence, we find that the combination of Kaplan and Bryant teaches limitation 2.2.

d. Limitation 2.3

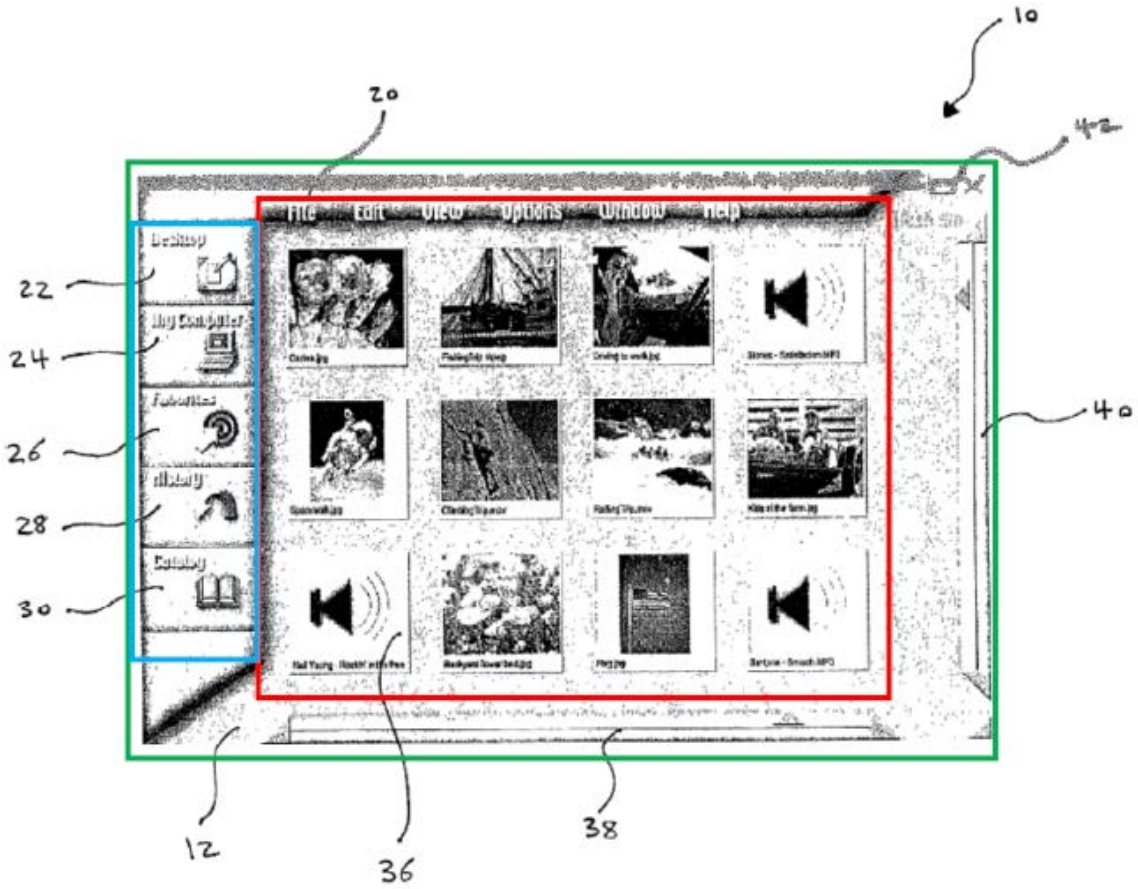
Claim 2 further recites "reproducing the selected video information read out from the recording medium" ("limitation 2.3"). Ex. 1001, 8:63–64. Regarding Kaplan, Petitioner refers to its analysis above for limitation 2.1 and contends "Kaplan would have suggested multiple reproducing steps to

a[n ordinarily skilled artisan]." Pet. 33 (citing Ex. 1003 ¶ 115). Regarding Bryant, Petitioner also cites its analysis for limitation 2.1 and contends "Bryant would have suggested multiple reproducing steps to a[n ordinarily skilled artisan]." *Id.* at 57 (citing Ex. 1003 ¶¶ 156–157).

Patent Owner does not dispute Petitioner's analysis relative to Kaplan. Patent Owner asserts the same arguments against Bryant not disclosing video reproduction capability, which we discussed above. *See supra* § II.D.3.b. Patent Owner does not dispute Petitioner's contentions about multiple reproduction steps. We are persuaded that Kaplan discloses video reproduction and Bryant suggests video reproduction for the same reasons discussed above. *See id.* We also are persuaded by Dr. Bederson's unrebutted testimony that multiple reproduction steps would have been obvious to an ordinarily skilled artisan in light of the references themselves. *See* Ex. 1003 ¶¶ 115 (citing Ex. 1004 ¶¶ 56–57, Fig. 16), 157 (citing Ex. 1005, Figs. 9A–9C). Based on Petitioner's evidence, we find that the combination of Kaplan and Bryant teaches limitation 2.3.

e. Limitation 2.4

Claim 2 further recites "wherein a first area and a second area are displayed within a menu display" ("limitation 2.4"). Ex. 1001, 8:64–65. For the recited "first area" and "second area . . . displayed within a menu display," Petitioner provides an annotated version of Kaplan's Figure 4, which is reproduced below.



Pet. 37. In this annotated version of Kaplan's Figure 4, Petitioner indicates its mapping of the "first area" in blue, the "second area" in red, and the "menu display" in green. *Id.* at 36.

Petitioner also cites annotated versions of Bryant's Figures 9A–9C for teaching limitation 2.4. *See* Pet. 60–62. Petitioner's annotated version of Figure 9A is reproduced below.

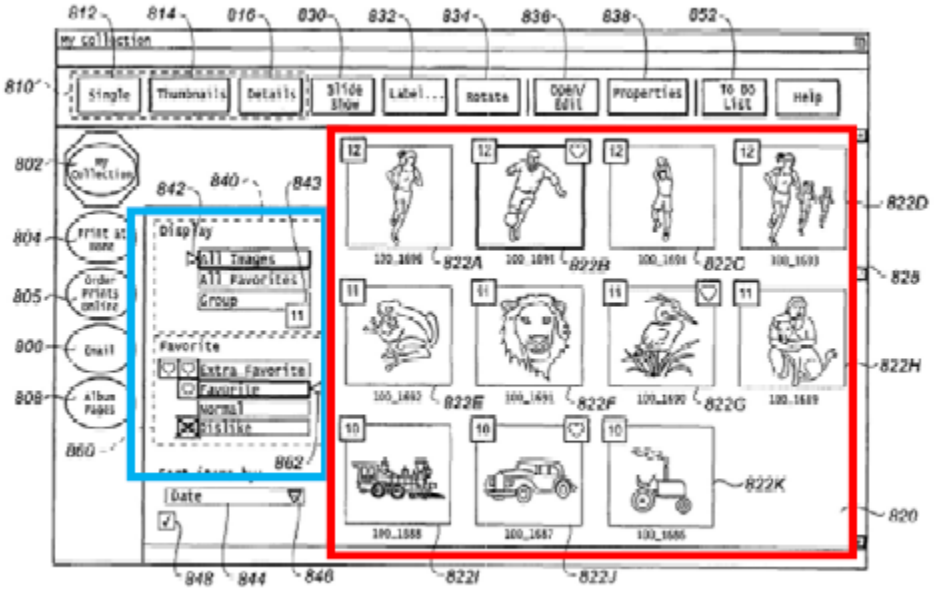


FIG. 9A

Pet. 61. In this annotated version of Figure 9A, Petitioner indicates its mapping of the "first area" (i.e., selection area 840) in blue and the "second area" (i.e., thumbnail image display area 820) in red. *Id.* at 62 (citing Ex. 1005 ¶ 89).

Patent Owner does not dispute Petitioner's analysis. We are persuaded by Petitioner's annotated figures, which show that Kaplan and Bryant both teach a menu display with a first area and a second area. Thus, we find that the combination of Kaplan and Bryant teaches limitation 2.4.

f. Limitation 2.5

Claim 2 further recites "wherein the first area is configured to display at least first indication associated with a first group of video information for a first classification and second indication associated with a second group of video information for a second classification different from the first classification" ("limitation 2.5"). Ex. 1001, 8:66–9:4. Within the "first area" shown in Kaplan's annotated version of Figure 4 above, Petitioner

maps the "first indication" and "second indication" to different groups of options selected among Desktop 22, My Computer 24, Favorites 26, History 28, and Catalog 30. *Id.* at 37–38 (citing Ex. 1003 ¶¶ 92–95, 121; Ex. 1004 ¶¶ 42, 44–50). Citing Dr. Bederson's testimony, Petitioner contends an ordinarily skilled artisan

> would have recognized that the first/second group of video information for a first/second classification was user defined [in Kaplan] for at least the reason that the user could edit the content of the information in the group . . . . For example, videos were classified as "Favorite" because they were a favorite of the user; videos were classified under "History" based on the user's access of the video, and videos were in the computer's "Catalog" because the user stored the videos in the system.

Id. at 38 (citing Ex. 1003 ¶ 121; Ex. 1004 ¶¶ 42–47) (alteration in original; internal quotation omitted).

Petitioner also cites Bryant for teaching limitation 2.5. Within the "first area" as shown in annotated version of Bryant's Figure 9A above, Petitioner maps the "first indication associated with a first group of video information for a first classification" to Bryant's "All Favorites" group, which corresponds to all images marked "Favorite." *Id.* at 63 (citing Ex. 1003 ¶¶ 160–162; Ex. 1005 ¶¶ 89–90, Figs. 9A, 9B). Petitioner likewise maps the "second indication associated with a second group of video information for a second classification" to "All Images" or "Groups" (i.e., all images in a numbered group). *Id.*

Patent Owner does not dispute Petitioner's analysis. Petitioner has persuasively shown that various choices among Kaplan's Desktop 22, My Computer 24, Favorites 26, History 28, and Catalog 30 are commensurate with the recited first and second indications/classifications. *See id.* at 37–38.

We also are persuaded by Petitioner's analysis showing Bryant's "All Favorites" are commensurate with the first indication/classification and "All images" or "Groups" are commensurate with the second indication/ classification. *See id.* at 63. Thus, we find that the combination of Kaplan and Bryant teaches limitation 2.5.

g. Limitation 2.6

Claim 2 further recites "wherein the second area is configured to display thumbnails corresponding to video information recorded on the recording medium by the recording unit" ("limitation 2.6"). Ex. 1001, 9:5–7. Petitioner cites the thumbnails in Kaplan's display. Pet. 33–35 (citing Ex. 1003 ¶¶ 119–125; Ex. 1004, ¶¶ 40–50, 56–57, Figs. 7–12, 14, 16). Petitioner also cites Bryant for teaching limitation 2.6. According to Petitioner, "Bryant . . . uses thumbnails in area 820, which correspond to video information on the recording medium." *Id.* at 63 (citing Ex. 1003 ¶¶ 160–162; Ex. 1005 ¶¶ 89–90, Figs. 9A, 9B).

Patent Owner does not dispute Petitioner's analysis. We are persuaded by Petitioner's showing that Kaplan's thumbnails correspond to recorded video information. *See* Ex. 1004 ¶ 40 ("[T]humbnails 36 provide users with a more intuitive method of managing computer files, such as multimedia content . . . ."). We also are persuaded by Petitioner's showing about Bryant's "area 820 for displaying thumbnail images." Ex. 1005 ¶ 89. Thus, we find that the combination of Kaplan and Bryant teaches limitation 2.6.

h. Limitations 2.7 and 2.8

Claim 2 further recites "wherein, when the first indication shown in the first area is selected, displaying, in the second area, a first group of thumbnails corresponding to the first group of video information" and "wherein, when the second indication shown in the first area is selected, displaying, in the second area, a second group of thumbnails corresponding to the second group of video information" ("limitations 2.7 and 2.8"). Ex. 1001, 9:8–15. For the first group of thumbnails, Petitioner cites Kaplan's display of thumbnails corresponding to a selected option (e.g., Favorites) in the first area. *Id.* at 38–39 (citing Ex. 1004 ¶¶ 40–42, Figs. 7, 8). Petitioner cites similar teachings from Kaplan regarding other selected options (e.g., Catalog) for "displaying . . . a second group of thumbnails." *Id.* at 39–40 (citing Ex. 1003 ¶¶ 92–95, 122, 123; Ex. 1004 ¶¶ 47, 50, Fig. 11).

Petitioner also cites Bryant for teaching limitations 2.7 and 2.8. According to Petitioner, "Bryant discloses that when a first indication (e.g., 'All Favorites') shown in the first area (blue box) is selected, the system displays in the second area (red box), a first group of thumbnails corresponding to the first group of video information (*e.g.*, all images marked 'Favorite')." *Id.* at 63–64 (citing, *inter alia*, Ex. 1005 ¶¶ 88–89, 98–99, Figs. 3B, 9B). Petitioner further contends that when Bryant's "second indication (e.g., 'All images' or 'Groups') shown in the first area is selected, Bryant displays in the second area, a second group of thumbnails corresponding to the second group of video information." *Id.* at 63–64 (citing Ex. 1005 ¶¶ 89, 102, Figs. 9A, 9B).

Patent Owner does not dispute Petitioner's analysis. Petitioner's evidence from Kaplan shows how selecting Favorites and Catalog in the first area result in different groups of thumbnails being displayed in the second area. *Compare* Ex. 1004, Fig. 7, *with id.* at Fig. 11. Petitioner also establishes that selecting "All Images" and "All Favorites" in Bryant's first area results in different groups of thumbnails being displayed in area 820. *Compare* Ex. 1005, Fig. 9A, *with id.* at Fig. 9B. Based on Petitioner's evidence, we find that Kaplan teaches limitations 2.7 and 2.8.

i. Limitation 2.9

Claim 2 further recites "wherein, even if one video information recorded on the recording medium included in both the first group of video information and the second group of video information is deleted from the first group of video information, the one video information continue to be included in the second group of video information" ("limitation 2.9"). Ex. 1001, 9:16–21. With respect to limitation 2.9, Petitioner cites, *inter alia*, the user interface in Bryant's Figures 9A–9C and the structure of Bryant's local database with assets table 600 and data fields 610 for a given media object. *Id.* at 65–66 (Ex. 1003 ¶¶ 168–169; Ex. 1005, Figs. 8, 9A–9C). With reference to Figures 9A–9C, Petitioner cites an example pertaining to a thumbnail image of a crane where "the media file corresponding to the crane, 100_1690 (822G), is classified as a 'Favorite,' as part of 'Group/11,' and is included in 'All Images.'" *Id.* at 66–68 (citing Ex. 1003 ¶ 169; Ex. 1005, Figs. 9A–9C). In light of these teachings, Petitioner contends an ordinarily skilled artisan "would have recognized from Bryant that if the crane media object were removed as a favorite, the media object would

continue to be included in the 'All images' and 'Group/11' groups of video information." *Id.* at 68 (citing Ex. 1003 ¶ 170; Ex. 1005 ¶ 100). Petitioner additionally cites Bryant's teachings that information is reset and metadata is updated when images are no longer considered favorites. *Id.* at 68–69 (citing Ex. 1003 ¶ 170; Ex. 1005 ¶¶ 82–87, 96–101).

Patent Owner argues Bryant "does not disclose[], explicitly or inherently, the language of element [2.9]—deletion of video information in one group while it remains in another group." PO Resp. 40 (citing Ex. 2002 ¶ 119). Patent Owner also disputes that "un-selecting a Favorite image in one group" teaches deletion of information. *Id.* at 43 (citing Ex. 2002 ¶ 125). Patent Owner similarly criticizes Petitioner's analysis for Bryant because "'removal' of an 'item' does not equate to deletion of video information as set forth in element [2.9]." PO Sur-reply 11 (quoting Pet. Reply 9). Patent Owner likewise argues that reclassifying items among groups "is not deletion of video information." PO Sur-reply 11. Patent Owner also cites instances of the word "delete" from Bryant for the proposition that the Bryant patentees knew how to specify deletion, but did not do so with respect to resetting metadata. PO Resp. 43–45 (citing Ex. 1005 ¶ 136, Fig. 11B, claims 5, 24; Ex. 2002 ¶¶ 125–128).

Patent Owner additionally criticizes (*see* PO Sur-reply 11–14) the mechanism by which Bryant allows for classifying video information, namely, by modifying favorites level metadata 666 (i.e., "favlevel") in the range from -10 to +10. *See* Ex. 1005 ¶¶ 84, 88, 92, 97, 104, 107, Fig. 8. Patent Owner argues this is not deletion of video information, but rather "reassignment of metadata." PO Sur-reply 12; *see also* Ex. 1027, 77:7–8

(Mr. Lipoff testifying that a user in Bryant "can change the metadata but not delete.").

As a matter of claim construction, we do not agree with Patent Owner's arguments insofar as they would require the deletion of underlying AV data. *See supra* § II.C. Rather, as discussed above, "delet[ion] from the first group of video information" may include unregistering video information from the first group. *See id.* Thus, Patent Owner's arguments requiring deletion of AV data are not commensurate with the scope of claim 2, which recites deletion *from a group*.

Bryant's teachings on resetting the favorites selection and updating favorites metadata (*see* Ex. 1005 ¶¶ 100–101) results in unregistering video information from the favorites group. *See* Pet. 68–69; Pet. Reply 10–11; *see also* Ex. 1027, 81:15–82:7 (Mr. Lipoff testifying "[t]hat once you would change the metadata to be something that no longer meets the threshold of favorite, that it would -- it would not be displayed."). A user can change the favorites level of an image (e.g., from a "Favorite" to "Normal") using selector 862 as depicted in the exemplary user interfaces of Figures 9A–9C. Ex. 1005 ¶ 100, Figs. 9A–9C. This results in the changing of favlevel metadata 666 to various values, which define the groups: "+ 10 if the image has been set to be an 'Extra Favorite', + 7 if the image has been set to be a 'Favorite', 0 if the image has been set to 'Normal', and - 7 if the image has been set to be 'Dislike'." *Id.* ¶¶ 97, 101. Thus, unregistering video information from the favorites group using selector 862—which results in

favlevel metadata 666 changing to something other than +7 (such as 0 for "Normal")—teaches "delet[ion] from the first group of video information."[6]

Petitioner further establishes that, in Bryant, video information "continue[s] to be included in the second group of video information" even when it is deleted from the favorites group. Dr. Bederson testifies that updating favorites metadata would not result in the deletion of the underlying file. Ex. 1003 ¶ 170 (citing Ex. 1005 ¶¶ 82–87, 96–101). Dr. Bederson explains why this is so with reference to the interplay of Bryant's "Favorites" group with other groups, such as "All Images":

> A[n ordinarily skilled artisan] would have understood that a user would have expected to be able to modify groups independently by deleting the video from one group (such as its inclusion in All Favorites), without removing its membership in a second group (such as All Images or Group/11). If un-favoriting a video image somehow removed it from its Group (e.g., sports) or from the full catalog of images (e.g., "All Images"), that would have limited the utility of the system and caused confusion for the user.

Ex. 1003 ¶ 171.

Although Patent Owner and Mr. Lipoff argue "Dr. Bederson's opinions are far too broad and conclusory, opining that the cited embodiments must operate a particular way" (PO Resp. 41; Ex. 2002 ¶ 121), they do not offer any contrary explanation. In fact, during cross-examination, Mr. Lipoff stated that his understanding of Bryant's "All Images" group depicted in Figure 9A is "that changing the metadata, the

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[6] We further note that, contrary to Patent Owner's arguments (*see* PO Resp. 43–45), Bryant's usages of the word "delete" do not control the analysis for how "deleted from the first group of video information" should be construed in the context of the '783 patent.

favorite flag does not delete the image" from that group. Ex. 1027, 83:9–84:10. As such, both declarants agree that deleting information from the favorites group would not remove the information from Bryant's All Images group. This supports Petitioner's and Dr. Bederson's interpretation of Bryant. *See* Pet. 69; Pet. Reply 11; Ex. 1003 ¶ 171. Thus, Petitioner persuasively shows that Bryant teaches "the one video information continue[s] to be included in the second group of video information."

For these reasons, we find that Bryant teaches limitation 2.9. Although this is sufficient to support Petitioner's obviousness contentions in the instant ground, we make the following comments regarding Petitioner's further contention that Kaplan also teaches limitation 2.9. *See* Pet. 41–44.

Specifically, Petitioner cites Kaplan's "use of an indexed database file and pointers" and contends that "groups of video information in the different categories are 'independently editable.'" *Id.* at 42–43 (citing Ex. 1003 ¶¶ 126–131, Ex. 1004 ¶ 44, claim 20). Petitioner also cites testimony from Dr. Bederson and argues that "a single data file is represented by multiple representations in [Kaplan's] user interface, [and] when a representation in one group (*e.g.*, 'Favorites') is deleted, the representation of that file in other groups (*e.g.*, 'History' or 'Catalog') remain[s]." *Id.* at 42 (citing Ex. 1003 ¶¶ 127–129).

Patent Owner argues Kaplan does not disclose, explicitly or inherently, the language of element 2.9. PO Resp. 28. Patent Owner also argues that Dr. Bederson's opinions on pointers "are far too broad and conclusory, opining that the cited embodiments must operate a particular way." *Id.* at 29 (citing Ex. 2002 ¶ 93). Patent Owner cites testimony from Mr. Lipoff and argues that pointers are not deleted as commonly as

Dr. Bederson claims. *Id.* at 30 (citing Ex. 2002 ¶ 94). Rather, according to Patent Owner, an ordinarily skilled artisan would have considered it far more common to delete the underlying record alone or to delete the underlying record and the pointer. PO Sur-reply 2–3 (citing Ex. 2002 ¶ 65). Patent Owner also criticizes Dr. Bederson's reliance on certain nominal references as background on pointers, and Patent Owner counters with citations to its own background references on pointers. *See* PO Resp. 6–17.

The parties' disagree about how an ordinarily skilled artisan would have interpreted Kaplan's teachings on pointers in light of Kaplan's teachings of various groups (including Favorites 26) in its user interface. *See* Ex. 1004 ¶¶ 40, 44. In essence, Patent Owner argues that Petitioner and Dr. Bederson read too much into Kaplan's teachings. Given that Bryant explicitly discloses how favorites are treated and that both parties' declarants agree that deleting information from Bryant's Favorites group does not remove the information from the All Images group, we need not resolve the parties' disagreement about whether Kaplan teaches limitation 2.9. Nonetheless, we note that Bryant also teaches the use of pointers for multimedia files. Ex. 1005 ¶¶ 81–83; *see also* Ex. 1003 ¶¶ 172–173 (Dr. Bederson citing same). In this way, Petitioner's cited teachings from Kaplan are consistent with those from Bryant.

Thus, we find that the combination of Kaplan and Bryant teaches limitation 2.9.

j. Reasons for the Combination

Petitioner contends an ordinarily skilled artisan would have been motivated to combine Kaplan and Bryant for at least two reasons: (1) to supplement the teachings of Kaplan

> by using Bryant's methods regarding image capture and "affectation [sic] information;" and (2) to use Bryant's robust disclosure of user-customizable metadata, such as editable "groups" (e.g., Animals, Sports) with corresponding areas of the interface menu.

Pet. 76 (citing Ex. 1003 ¶¶ 183–188). In particular, Petitioner contends an ordinarily skilled artisan "would have recognized that inclusion of the richer metadata in Bryant would have improved the Kaplan system, allowing for more effective (e.g., more detailed or more personalized) organization and retrieval of multimedia information." *Id.* at 77 (quoting Ex. 1003 ¶ 185). Petitioner cites "Bryant's robust disclosure of user-customizable metadata, such as 'groups' (e.g., Animals, Sports)" and contends "the corresponding areas of the interface menu in Kaplan could be updated." *Id.* Petitioner also quotes Dr. Bederson's testimony that, "[g]iven that Kaplan already included metadata, such as Favorites, adding additional metadata fields such as those taught by Bryant would have been a straight forward application of known programming techniques." *Id.* at 78–79 (quoting Ex. 1003 ¶¶ 187–188).

In its Response, Patent Owner recapitulates its arguments against Petitioner's analysis of various limitations in claim 2, but Patent Owner does not dispute Petitioner's rationale for the combination. *See* PO Resp. 49–50. Indeed, Patent Owner's only mention of Petitioner's rationale actually pertains to Patent Owner's argument that the combination of Kaplan and Bryant does not teach limitation 2.9: "[N]either of Petitioner's motivations to combine actually address the deficiencies in either Kaplan or Bryant for the reasons described herein. In other words, neither Bryant's 'more extensive metadata (e.g., affective information)' and/or customizable metadata discloses element [2.9], which is also missing from Kaplan." *Id.* at 50 (citing Ex. 2002 ¶ 141).

In its Sur-reply, Patent Owner argues "Petitioner never identifies why [an ordinarily skilled artisan] would believe Kaplan needs to be supplemented by Bryant. In other words, Petitioner never identifies what precisely is missing from Kaplan that would need to be supplemented by Bryant." PO Sur-reply 14.

We do not agree with Patent Owner's arguments. First, to the extent Patent Owner merely reasserts that the combination of Kaplan and Bryant does not teach the limitations of claim 2, we do not agree with these arguments for the reasons stated above. *See, e.g., supra* § II.D.3.i (discussing Patent Owner's arguments against limitation 2.9). Second, contrary to Patent Owner's arguments, Petitioner identifies two ways Kaplan's system would have been improved by Bryant's teachings: (1) by using Bryant's methods regarding image capture and "affective information" and (2) by using Bryant's user-customizable metadata, thus permitting more effective organization and retrieval of multimedia information. *See* Pet. 76–77 (citing Ex. 1003 ¶¶ 183–188). This refutes Patent Owner's argument (*see* PO Resp. 50; PO Sur-reply 14) that Petitioner does not identify what is "missing" in Kaplan and supplemented by Bryant.

Importantly, Patent Owner and Mr. Lipoff do not dispute the underlying premise of Petitioner's obviousness rationale: that an ordinarily skilled artisan "would have recognized that inclusion of the richer metadata in Bryant would have improved the Kaplan system, allowing for more effective (e.g., more detailed or more personalized) organization and retrieval of multimedia information." Pet. 77 (citing Ex. 1003 ¶ 185). Correspondingly, Bryant discloses extensive and specific metadata with reference to Bryant's Figure 8. Petitioner also shows that the combination

would have been predictably successful. *Id.* at 78–79 (citing Ex. 1003 ¶¶ 187–188). We are persuaded by Petitioner's rationale, which is based on Dr. Bederson's unrebutted testimony. *See* Ex. 1003 ¶¶ 184–188.

k. Patent Owner's Arguments Regarding Certain References in the Prosecution History

Patent Owner argues that an ordinarily skilled artisan "would view Bryant's reference to resetting the metadata . . . as no different than the prior art relating to pointers and/or data structures already considered by the examiner." PO Resp. 47 (citing Ex. 1005 ¶¶ 82–87, 96–101; Ex. 2002 ¶ 132). Patent Owner's argument relates to its contention that the patent examiner considered numerous references "that generally related to pointers and thumbnail data structures" during prosecution of the applications leading to the '783 patent, but still allowed the challenged claims. *Id.* at 45–46 (citing Ex. 2002 ¶ 130); *see also id.* at 17–27 (discussing prosecution history for applications related to the '783 patent). Patent Owner makes similar arguments with respect to Kaplan. *See id.* at 32–34.

Patent Owner's arguments are akin to those that can be made under 35 U.S.C. § 325(d) when "the same or substantially the same prior art or arguments previously were presented to the Office." Nevertheless, arguments under § 325(d) relate to our determination whether to institute an *inter partes* review. *See id.* Patent Owner did not make any § 325(d) arguments prior to institution of this case, and such arguments are not apt after institution. As such, they do not impact our consideration of the asserted references, as discussed above.

l. Conclusion Regarding Claim 2

Having considered Petitioner's contentions and evidence and Patent Owner's arguments, we find that the combination of Kaplan and Bryant teaches every limitation of claim 2. Petitioner also has provided persuasive reasons for its proposed combination. On the entire trial record, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 2 would have been obvious over the combination of Kaplan and Bryant.

4. Claim 5

Claim 5 depends from claim 2 and further recites:

> wherein a thumbnail corresponding to the video information included in both the first group of video information and the second group of video information is displayed in the second area in each case when the first indication shown in the first area is selected and when the second indication shown in the first area is selected.

Ex. 1001, 10:12–17 ("limitation 5.1"). Petitioner cites Kaplan's Figures 7 and 8 as showing a thumbnail container of space images (element 54) displayed when both "Favorites" and "History" are selected. Pet. 45–47 (citing Ex. 1003 ¶ 134; Ex. 1004 ¶ 45, Figs. 7, 8). In light of this teaching, Petitioner contends "a video that was both a user's favorite and recently viewed would appear in the second area when both 'Favorites' and 'History' were selected." *Id.* Petitioner further contends Kaplan's use of a single thumbnail for each physical file with "multiple pointers . . . to represent the file across different accesses of the menu" is "merely an obvious design choice, well within the skill of a[n ordinarily skilled artisan]." *Id.* at 47–48 (citing Ex. 1003 ¶¶ 135–136; Ex. 1004 ¶ 44).

Petitioner also contends "Bryant teaches, or would have suggested, all limitations of dependent claim 5." *Id.* at 70. Petitioner cites Bryant's Figures 9A–9C as showing a thumbnail of crane 822G in multiple groups (e.g., "All Images," "All Favorites," and "Group/11") when the corresponding indication is selected. *Id.* at 70–72 (citing Ex. 1003 ¶ 175; Ex. 1005 ¶¶ 88–89, 98–99, 102–106, Figs. 9A–9C). Petitioner further contends claim 5 would have been obvious in light of Bryant's local database (with assets table 600 and data fields 610) and the interfaces shown in Figures 9A–9C. *Id.* at 72. According to Petitioner, an ordinarily skilled artisan "would have understood that when a given media file is simultaneously classified in multiple categories, its thumbnail would be shown when each of those categories was selected." *Id.* (citing Ex. 1003 ¶ 176).

We are persuaded by Petitioner's showing that both Kaplan and Bryant teach (1) video information included in multiple groups and (2) display of a thumbnail for such video information when each group is selected. *See* Ex. 1004, Figs. 7, 8; Ex. 1005, Figs. 9A–9C. Thus, we find that the combination of Kaplan and Bryant teaches limitation 5.1. Patent Owner relies on the same arguments it makes with respect to claim 2 (*see* PO Resp. 34, 48, 50–51, 53), which we have discussed above. On the entire trial record, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 5 would have been obvious over the combination of Kaplan and Bryant.

5. Claim 6

Claim 6 depends from claim 2 and further recites "wherein the first area is configured to display third indication different from the first indication and the second indication" ("limitation 6.1"). Ex. 1001, 10:21–23. Petitioner cites Kaplan's buttons corresponding to "Favorites," "History," and "Catalog" in the first area of its user interface for teaching "three or more indications." Pet. 49 (citing Ex. 1004, Figs. 7–12, 14, 16). Petitioner also cites Bryant's selection buttons corresponding to "All Images," "Favorites," and "Group" in the first area of its user interface. *Id.* at 73–74 (citing Ex. 1005 ¶¶ 89, 254–256, Figs. 9A–9C).

Claim 6 further recites "wherein, when the third indication shown in the first area is selected, thumbnails corresponding to the all video information recorded on the recording medium are displayed in the second area" ("limitation 6.2"). Ex. 1001, 10:24–27. Petitioner contends an ordinarily skilled artisan "would have understood that 'Catalog' is a third indication, which, when selected, displays thumbnails in Kaplan's second area corresponding to the all video information recorded on the recording medium." Pet. 49–50 (citing Ex. 1003 ¶ 139; Ex. 1004 ¶¶ 38, 44). Petitioner also cites Bryant for teaching limitation 6.2. Petitioner maps the first, second, and third indications to Bryant's "All Favorites," "Group [11]," and "All Images" selections, respectively. Petitioner contends that when "All Images" is selected, thumbnails are displayed "in Bryant's second area corresponding to the all video information recorded on the recording medium." *Id.* at 74–75 (citing Ex. 1003 ¶ 179; Ex. 1005 ¶¶ 88–89).

We are persuaded by Petitioner's showing that both Kaplan and Bryant teach a "third indication" encompassing "all video information

recorded on the recording medium." *See* Ex. 1004, ¶ 44, Fig. 10; Ex. 1005, ¶¶ 88–89, Fig. 9A. Furthermore, Petitioner's showing regarding display of the thumbnails corresponding to the third indication is persuasive for reasons similar to those discussed above with respect to limitations 2.7 and 2.8. *See id.*; *supra* § II.D.3.h. Thus, we find that the combination of Kaplan and Bryant teaches limitations 6.1 and 6.2. Patent Owner relies on the same arguments it makes with respect to claim 2 (*see* PO Resp. 34, 48, 50–51, 53), which we have discussed above. On the entire trial record, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 6 would have been obvious over the combination of Kaplan and Bryant.

E. Obviousness Ground Based on Bryant and Kaplan

Petitioner contends the subject matter of claims 2, 5, and 6 would have been obvious over the combination of Bryant and Kaplan. Pet. 28–76, 79–81; Pet. Reply 3–17. Patent Owner disputes Petitioner's contentions. PO Resp. 28–48, 51–53; PO Sur-reply 1–15.

1. Claim 2

For each limitation in claim 2, Petitioner relies on the same analysis from the Kaplan–Bryant obviousness ground, as discussed above. Pet. 76; *see supra* § II.D.3.b–i. Patent Owner relies on the same arguments against Petitioner's analysis of these limitations. *See* PO Resp. 51–52. For the same reasons discussed above, we find that the combination of Bryant and Kaplan teaches all limitations of claim 2. *See supra* § II.D.3.b–i.

Petitioner contends an ordinarily skilled artisan "would have been motivated to update Bryant by adding Kaplan's specific reproduction (e.g., playback) features," such as the "in-window thumbnail playback mechanism, or the specific full/partial screen playback mechanisms," into Bryant's user interface. Pet. 79–80 (citing Ex. 1003 ¶¶ 191–192; Ex. 1004 ¶¶ 51, 57, Fig. 16; Ex. 1005, Figs. 9A–9C). According to Petitioner, "[t]he combination would provide an improved playback mechanism for the user." *Id.* at 80. Petitioner explains that in-window viewing would have "let the user keep their eye focused on the area of the screen they were already working with." *Id.* (quoting Ex. 1003 ¶ 192). Petitioner notes that Kaplan itself touts these features as providing "convenience [for] the user." *Id.* (quoting Ex. 1004 ¶ 57). Petitioner additionally cites Dr. Bederson's testimony that "incorporating playback of video within Bryant would have been a straightforward use of technology that was already integrated into the operating system and would have been well within the skill of a[n ordinarily skilled artisan]." *Id.* at 80–81 (quoting Ex. 1003 ¶¶ 193–194).

In its Response, Patent Owner recapitulates its arguments against Petitioner's analysis of various limitations in claim 2, but Patent Owner does not dispute Petitioner's rationale for the combination. *See* PO Resp. 51–52. Indeed, Patent Owner's only mention of Petitioner's rationale actually pertains to Patent Owner's argument that the combination of Bryant and Kaplan does not teach limitation 2.9:

> [N]one of Petitioner's motivations to combine actually address the deficiencies in either Kaplan or Bryant for the reasons described herein. In other words, Kaplan's specific reproduction (e.g., playback) features, such as the in-window thumbnail playback mechanism, or the specific full/partial

> screen playback mechanism does not disclose element [2.9], which is also missing from Bryant.

Id. at 52 (citing Ex. 2002 ¶ 148) (internal quotations omitted).

In its Sur-reply, Patent Owner argues "Petitioner never identifies why [an ordinarily skilled artisan] would believe Bryant needs to be supplemented by Kaplan, nor what is missing from Bryant that Kaplan provides." PO Sur-reply 15.

We do not agree with Patent Owner's arguments. First, to the extent Patent Owner merely reasserts that the combination of Bryant and Kaplan does not teach the limitations of claim 2, we do not agree with these arguments for the reasons stated above. *See, e.g., supra* § II.D.3.i (discussing Patent Owner's arguments against limitation 2.9). Second, contrary to Patent Owner's arguments, Petitioner identifies features from Kaplan that are not present in Bryant, including "Kaplan's in-window thumbnail playback mechanism" and "the specific full/partial screen playback mechanisms." Pet. 79–80 (citing Ex. 1003 ¶¶ 191–192; Ex. 1004 ¶¶ 51, 57, Fig. 16). This refutes Patent Owner's argument (*see* PO Resp. 52; PO Sur-reply 15) that Petitioner does not identify what is "missing" in Bryant.

Again, Patent Owner and Mr. Lipoff do not dispute the underlying premise of Petitioner's obviousness rationale: that an ordinarily skilled artisan "would have been motivated to update Bryant by adding Kaplan's specific reproduction (e.g., playback) features into the user interface of Bryant." Pet. 79. Petitioner shows how Kaplan teaches "Player Controls 88 . . . within the thumbnail 160" and a "full screen mode" for "the convenience of the user." *Id.* at 79–80 (quoting Ex. 1004 ¶ 57); *see also* Ex. 1004 ¶ 57 (discussing "three-quarter, half and other fractional screen sizes"). Beyond

Kaplan's express teaching of user convenience, Dr. Bederson explains the benefit of how in-window media playing "let[s] the user keep their eye focused on the area of the screen they were already working with." Ex. 1003 ¶ 192. Petitioner also shows that the combination would have been predictably successful. Pet. 80–81 (citing Ex. 1003 ¶¶ 193–194). We are persuaded by Petitioner's rationale, which is based on Dr. Bederson's unrebutted testimony. *See* Ex. 1003 ¶¶ 190–194.

Having considered Petitioner's contentions and evidence and Patent Owner's arguments, we find that the combination of Bryant and Kaplan teaches every limitation of claim 2. Petitioner also has provided persuasive reasons for its proposed combination. On the entire trial record, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 2 would have been obvious over the combination of Bryant and Kaplan.

2. Claims 5 and 6

For each limitation in claims 5 and 6, Petitioner relies on the same analysis from the Kaplan–Bryant obviousness ground, as discussed above. Pet. 76; *see supra* § II.D.4–5. Patent Owner relies on the same arguments it makes with respect to claim 2 (*see* PO Resp. 34, 48, 51–53), which we have discussed above. For the same reasons discussed above in the Kaplan–Bryant ground, we find that the combination of Bryant and Kaplan teaches all limitations of claims 5 and 6. *See supra* § II.D.4–5. On the entire trial record, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 5 and 6 would have been obvious over the combination of Bryant and Kaplan.

F. Additional Grounds

Based on our disposition of the Kaplan–Bryant ground and the Bryant–Kaplan ground above, and given that Patent Owner does not dispute the underlying premise of Petitioner's persuasive obviousness rationale for these combinations, we need not reach Petitioner's obviousness grounds based on Kaplan alone and Bryant alone.

III. CONCLUSION

Petitioner has shown, by a preponderance of the evidence, that claims 2, 5, and 6 would have been obvious over (1) the combination of Kaplan and Bryant and (2) the combination of Bryant and Kaplan. Because those obviousness grounds are dispositive as to all challenged claims, we do not reach Petitioner's obviousness grounds based on Kaplan alone and Bryant alone. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner "is entitled to a final written decision addressing all of the claims it has challenged").

ORDER

Accordingly, it is:

ORDERED that claims 2, 5, and 6 of the ’783 patent are held to be unpatentable;[7] and

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

In summary:

Claims	**35 U.S.C. §**	**Reference(s)**	**Claims Shown Unpatentable**	**Claims Not shown Unpatentable**
2, 5, 6	103(a)	Kaplan, Bryant	2, 5, 6	
2, 5, 6	103(a)	Bryant, Kaplan	2, 5, 6	
2, 5, 6	103(a)	Kaplan[8]		
2, 5, 6	103(a)	Bryant[8]		
Overall Outcome			2, 5, 6	

[7] 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).

[8] We do not reach these grounds. *See supra* § II.F.

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