

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CUSTOMPLAY, LLC,  
Petitioner,

v.

CLEARPLAY, INC.,  
Patent Owner.

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Case IPR2014-00339  
Patent 7,526,784 B2

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Before KARL D. EASTHOM, JUSTIN T. ARBES, and  
BARRY L. GROSSMAN, *Administrative Patent Judges*.

GROSSMAN, *Administrative Patent Judge*.

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

## I. INTRODUCTION

CustomPlay, LLC (“Petitioner”) filed a Corrected Petition requesting an *inter partes* review of claims 1–9 (all of the claims) of U.S. Patent No. 7,526,784 B2 (“the ’784 patent”). Paper 4 (“Pet.”). ClearPlay, Inc. (“Patent Owner”) filed a Patent Owner Preliminary Response. Paper 9 (“Prelim. Resp.”). We instituted an *inter partes review* of claims 1, 2, and 4–9 on the ground of obviousness under 35 U.S.C. § 103(a) based on Abecassis<sup>1</sup> and Malkin.<sup>2</sup> Paper 12 (“Dec. on Inst.”). We denied Patent Owner’s Request for Rehearing (Paper 14, “Req. Reh’g”). Paper 15. Patent Owner filed a Patent Owner Response. Paper 17 (“PO Resp.”). Petitioner filed a Reply. Paper 18 (“Pet. Reply”).

An oral hearing was held on April 20, 2015. A transcript of the hearing is included in the record. Paper 26 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine Petitioner has shown, by a preponderance of the evidence, that claims 1, 2, and 4–9 are unpatentable.

### *A. Related Proceedings*

The ’784 patent is related to the patents involved in IPR2013-00484, IPR2014-00383, and IPR2014-00430.

### *B. The ’784 Patent*

The ’784 patent relates generally to filtering multimedia content, such as scenes or language unsuitable for viewers of some ages. Ex. 1009, col. 1, ll. 18–25. More specifically, the invention claimed in the ’784 patent relates to a method for automatically identifying and filtering portions of multimedia content

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<sup>1</sup> US Pat. No. 6,408,128 B1, filed Nov. 12, 1998, issued June 18, 2002. Ex. 1012.

<sup>2</sup> US Pat. No. 6,317,795 B1, filed July 22, 1997, issued Nov. 13, 2001. Ex. 1013.

during the decoding process. *Id.* at col. 4, ll. 37–39.

Figure 2 from the '784 patent, shown below, is a block diagram showing the four basic components of a system embodying the claimed invention.

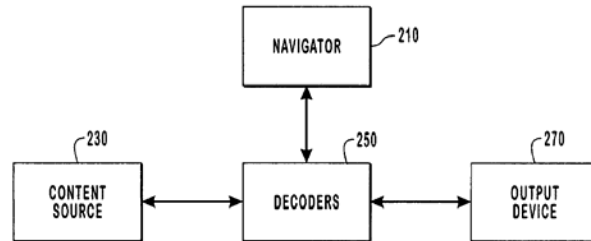


Figure 2 from the '784 patent.

Figure 3C from the '784 patent, shown below, provides additional details for the four basic components shown in Figure 2.

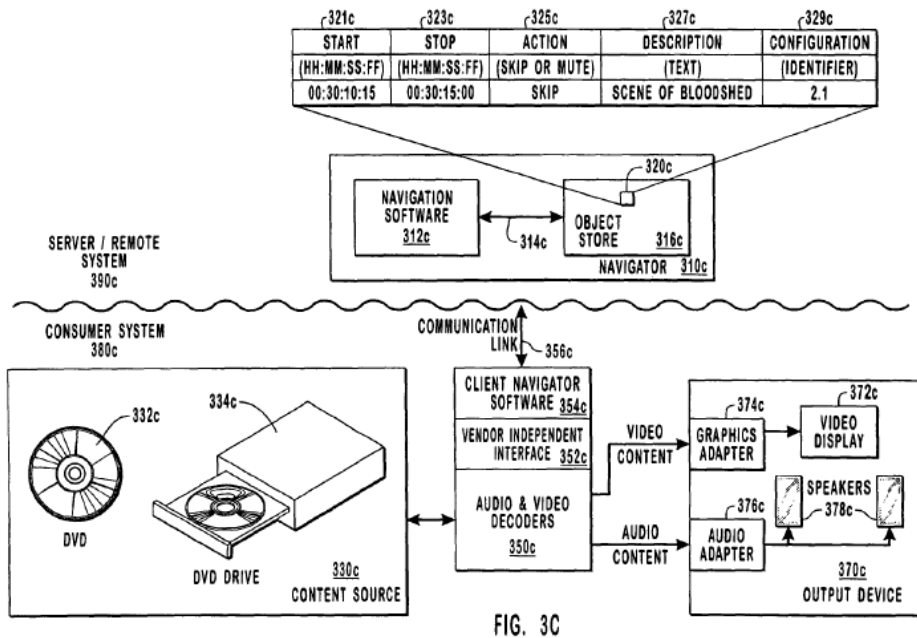


FIG. 3C

Fig. 3C is a block diagram showing system components.

As described in the Specification, and as shown generally in FIG. 3C, the system includes server/remote system 390c and consumer system 380c. *Id.* at col. 13, ll. 3–8. Content source 330c, audio and video decoders 350c, and output device 370c are located at consumer system 380c. *Id.* Navigator 310c is located at

server/remote system 390c. *Id.* The navigator “is software and/or hardware that control the decoders by determining if the content being decoded needs to be filtered.” *Id.* at col. 10, ll. 35–37. Server/remote system 390c and consumer system 380c are connected through communication link 356c. *Id.* at col. 13, ll. 23–36.

The ’784 patent system creates “navigation objects” that are transmitted from the server to the consumer through the communication link. The navigation objects define portions of the multimedia content to be filtered. Ex. 1009, col. 4, ll. 48–50. Each navigation object contains a start position, a stop position, and a filtering action for the portion of the multimedia content defined by the start and stop positions. *Id.* at col. 4, ll. 50–53. The Specification of the ’784 patent discloses several filtering actions: “skip” (*id.* at col. 5, l. 7); “mute” (*id.* at col. 5, l. 27); and “reframe” (*id.* at col. 5, l. 44). The ’784 patent also refers to these filtering actions as “editing actions.” *Id.* at col. 5, l. 59–col. 6, l. 6. The navigation objects, including the filtering actions, are obtained through a server system linked to a consumer system through a communication link for use by the user. *Id.* at col. 7, l. 47–col. 8, l. 9.

### *C. Illustrative Claim*

Claim 1, the sole independent claim, is illustrative of the claimed subject matter and is reproduced below.

1. In a server system linked to a consumer system through a communication link, wherein the consumer system includes a processor, a memory, a decoder, and an output device for playing multimedia content, and wherein the server system enables the consumer system to filter multimedia content that is comprised of video content, audio content, or both, a method of assisting the consumer system to automatically identify portions of the multimedia content that are to be filtered and to thereafter

automatically filter the identified portions, the method comprising the server system performing the acts of:

obtaining a plurality of navigation objects which can be loaded into a memory of the consumer system, each navigation object defining a portion of the multimedia content that is to be filtered by defining a start position, a stop position, and a specific filtering action to be performed on the portion of the multimedia content defined by the start and stop positions for that portion;

receiving a request for one or more navigation objects from the consumer system, the request identifying the multimedia content to be played at the consumer system;

sending the one or more navigation objects to the consumer system for processing;

whereby the consumer system is adapted to filter the multimedia content by activating the filtering action for each portion of the multimedia content defined by the start and stop positions of each navigation object.

## II. ANALYSIS

### A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs. LLC*, \_ F.3d \_, No. 2014-1301, 2015 WL 4097949, at \*7–8 (Fed. Cir. July 8, 2015) (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation”). Claim terms also are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes definitions for certain claim terms in the '784 patent. Pet. 10–13. Patent Owner does not propose any claim constructions, nor does Patent Owner dispute Petitioner’s proposed definitions. Patent Owner, however,

seeks to “clarif[y]” our construction of the terms “start position” and “stop position.” PO Resp. 12. We address below claim constructions for the terms at issue in this proceeding. Unless otherwise indicated, each of the terms listed below appears in independent claim 1.

*1. Filtering/Filtered*

Independent claim 1 recites “obtaining a plurality of navigation objects which can be loaded into a memory of the consumer system, each navigation object defining a portion of the multimedia content that is to be *filtered* by defining a start position, a stop position, and a specific *filtering* action to be performed” (emphases added).

The Specification states that “navigation objects . . . define portions of the multimedia content that should be filtered.” Ex. 1009, col. 4, ll. 48–50. The Specification provides three examples of filtering actions, referred to as “skip,” “mute,” and “reframe.” *Id.* at col. 5, ll. 7, 27, 44. Following these examples, the Specification includes two paragraphs describing “discontinuities, irregularities, or artifacts” that may result from editing actions or filtering actions. *Id.* at col. 5, l. 59–col. 6, l. 21. These two paragraphs are identical except for the interchange of the words “editing” and “filtering.” These two paragraphs conclude with the following sentence:

As used in this application, filtering<sup>3</sup> actions should be interpreted broadly to encompass all types of actions that may be useful in filtering multimedia content, including incremental filtering actions that are either separate from or combined with other filtering actions.

*Id.* at col. 6, ll. 17–21.

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<sup>3</sup> The first paragraph substitutes “editing” for “filtering.”

Accordingly, the broadest reasonable construction of the terms “filtering,” or “filtered,” in light of the Specification of the ’784 patent and ordinary usage, is editing or rejecting some multimedia content while allowing other multimedia content to pass unchanged.

## *2. Navigation Object*

The Specification states that “navigation objects” define portions of the multimedia content that should be filtered. Ex. 1009, col. 4, ll. 48–50. The Specification also discloses that each navigation object contains a start position, a stop position, and a filtering action to be performed on the portion of the multimedia content that is defined by the start position and stop position. *Id.* at 50–53. Independent claim 1 mirrors this language, requiring that each navigation object define a start position, stop position, and a specific filtering action.

Accordingly, the broadest reasonable construction of the phrase “navigation object” in light of the Specification of the ’784 patent is information that defines both (1) a portion of multimedia content to filter and (2) the filtering action to be taken on the defined portion of multimedia content.

## *3. Start and Stop Positions*

Claim 1 states that the navigation object defines a portion of the multimedia content to be filtered by “defining a start position [and] a stop position.” We agree with Patent Owner that the two positions must be different in order to define a portion of multimedia content. *See* PO Resp. 12–13. The Specification states that “[e]ach navigation object contains a start position, a stop position, and a filtering action to be performed on the portion of the multimedia content that is defined by the start position and stop position.” Ex. 1009, col. 4, ll. 50–53. In the context of a skip-type filtering action, for example, the portion of the multimedia content defined between the start and stop positions of the multimedia content is never

decoded and, as a result, is never transferred to a multimedia output device, such as a video display. *Id.* at col. 5, ll. 7–13. Accordingly, the broadest reasonable construction of the term “start position” in light of the Specification of the ’784 patent is information that defines a beginning of a portion of multimedia content; and the broadest reasonable construction of the term “stop position” in light of the Specification of the ’784 patent is information that defines an ending of a portion of multimedia content, which is different than the start position.

*B. Asserted Ground of Unpatentability*

*1. Obviousness Based on Abecassis and Malkin*

To prevail on its patentability challenge, Petitioner must establish facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Petitioner asserts that claims 1, 2, and 4–9 are unpatentable under 35 U.S.C. § 103(a) over Abecassis and Malkin. Pet. 25–48; Pet. Reply 3–15. Patent Owner disagrees with Petitioner’s assertions, and relies on the Declaration of Sayfe Kiaei, Ph.D. PO Resp. 14–55 (citing Ex. 2001). We have reviewed the evidence and arguments presented by the parties and determine that Petitioner has demonstrated, by a preponderance of the evidence, that Abecassis and Malkin teach all of the limitations of the claims, and that a person of ordinary skill in the art would have had reason to combine their teachings to achieve the recited methods.

According to Petitioner, “the question of patentability before the Board rests in the analysis of the ‘navigation object’ claim limitation.” Pet. 14; *see also* Tr. 4, ll. 8–11 (“[T]he principal issue, if not the only issue, that remains for the hearing concerns the navigation object or filtering information limitations that are found in all of the claims under review.”). Petitioner frames the dispositive issue as follows: “the issue is whether the combined teachings of Abecassis and Malkin



would suggest to one of ordinary skill in the art what is claimed in the navigation object limitation.” Tr. 4, ll. 17–20. We frame the issue somewhat differently. The issue is whether the differences between the subject matter sought to be patented 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.

Patent Owner agrees that the claimed navigation object is the critical, dispositive element, but asserts that the combination of Abecassis and Malkin fails to teach or suggest a navigation object. PO Resp. 41. Patent Owner also agrees with Petitioner that “to a large extent regarding what Clearplay does, what Abecassis does, what Malkin does, is very similar.” Tr. 30, ll. 19–21. Patent Owner states that:

from the user’s perspective, it may be hard to tell a difference, especially with what Abecassis does and what Clearplay does. They are very, very similar. That doesn’t matter. It’s not what they do, it’s how they do it, and that’s what’s been lost in Petitioner’s argument. What matters is what’s in the claims.

Tr. 31, ll. 1–5. We agree; what matters is what is claimed.<sup>4</sup> Accordingly, we proceed to an analysis of the claims in the context of the references to determine whether the preponderance of the evidence establishes that the challenged claims would have been obvious in view of Abecassis and Malkin.

Section 103(a) provides that a claim is unpatentable when “the differences between the subject matter sought to be patented and the prior art are such that the

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<sup>4</sup> “[T]he name of the game is the claim.” Giles S. Rich, *The Extent of the Protection and Interpretation of Claims-American Perspectives*, 21 INT’L REV. INDUS. PROP. & COPYRIGHT L. 497, 499 (1990). “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (citation omitted).

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.” 35 U.S.C. § 103(a) (2004). In *Graham v. John Deere Co.*, 383 U.S. 1 (1966), the Court set out a framework for applying the statutory language of § 103:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.

*Id.* at 17–18. “While the sequence of these questions might be reordered in any particular case, the factors continue to define the inquiry that controls.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007).

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *Id.* at 415. Whether a patent claiming a combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To reach this conclusion, however, requires “more than a mere showing that the prior art includes separate references covering each separate limitation in a claim.” *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). “Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

Against this general background, we consider the references, other evidence, and arguments on which the parties rely.

## 2. *Scope and Content of the Prior Art*

### a. *Abecassis*

Petitioner relies on the combined teachings of Abecassis and Malkin as teaching a “navigation object defining a portion of the multimedia content that is to be filtered by defining a start position, a stop position, and a specific filtering action to be performed on the portion of the multimedia content defined by the start and stop positions for that portion,” as recited in claim 1. Pet. 15–24, 33–35. Specifically, Petitioner relies on Malkin’s teaching of fuzz-balls in a control specification for the “filtering action” aspect of the claim, and relies on Abecassis for other aspects of the claim. *Id.* As stated by Petitioner, “[w]e’re relying on Malkin to supply the third information element of the navigation object [i.e., the filtering action]. And that’s it. Everything else is in Abecassis.” Tr. 97, ll. 1–3. We briefly describe the “everything else” disclosed in Abecassis.

Abecassis discloses the use of “video maps” that identify the start, stop, and subject matter content of various scenes in a movie or other multi-media presentation. Ex. 1012, col. 16, ll. 13–22. A video map identifies the beginning frame and end frame in each of the relevant segments, and assigns the segment a content category code and/or descriptor(s). *Id.* at col. 16, ll. 19–22. The descriptors may define categories such as profanity, violence, bloodshed, monsters, nudity, or sex. *Id.* at Fig. 5B. The video map may indicate that the described category has none of the defined category (for example, no bloodshed), or may indicate various levels of the defined category, such as implied, explicit, or graphic levels of the defined category. *Id.* Once a segment is assigned a descriptor, logical entry (start) and exit (stop) references are assigned. *Id.* at col. 16, ll. 25–26, col. 20, ll. 1–6. Thus, each segment “is defined by a beginning and ending frame and comprises any number of frames.” *Id.* at col. 20, ll. 4–6. The resulting segment

definitions are mapped, and the required user interface is produced. *Id.* at col. 16, ll. 26–28. The video map’s data is provided with video and audio data contained on a CD or other multi-media content source. *Id.* at col. 16, ll. 34–35.

The steps in the production of a variable content video are summarized with respect to the flow chart in Figure 5A. Each scene, segment, or fragment of a segment on a video script is reviewed according to an appropriate video descriptive structure, as shown in Figures 5B–5E. *Id.* at col. 15, ll. 58–63. Where necessary, a video segment is associated with an audio segment, and corresponding separate audio and video category codes are provided. *Id.* at col. 16, ll. 13–18.

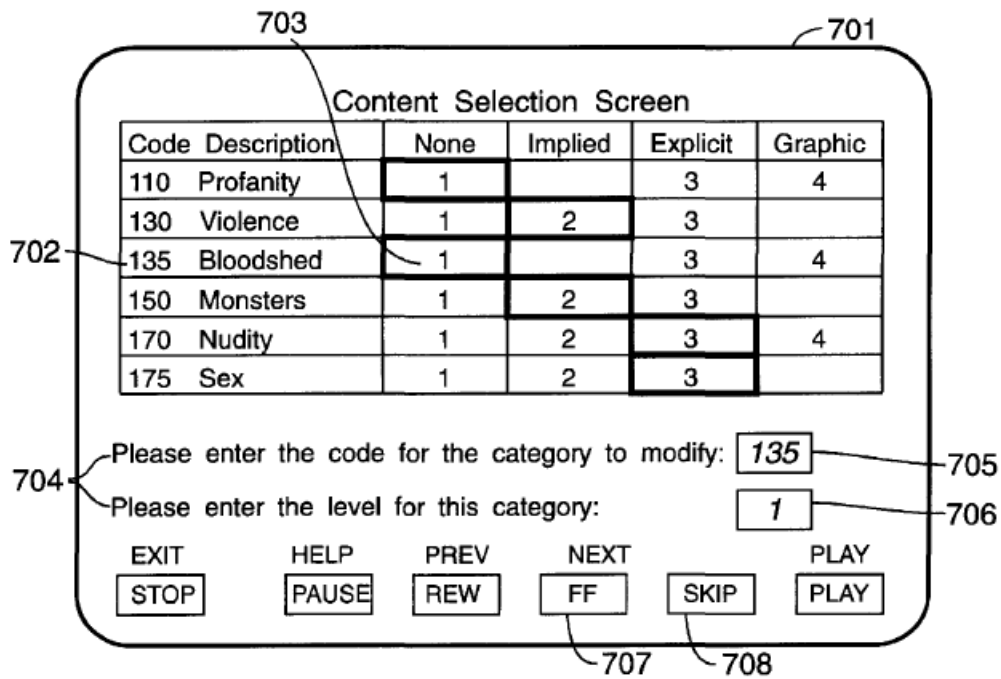
The video map itself does not establish or define any specific filtering action. The video map descriptors, such as profanity, violence, bloodshed, monsters, nudity, and sex, by themselves, do not describe or specify a distinct filtering operation. In the context of a movie, for example, a user may watch the movie unedited, without filtering any content. The video map, and the corresponding user interface, however, allows the user to filter out, or skip, selected segments, for example, explicit bloodshed, while retaining all other content. *Id.* at col. 20, ll. 14–25. Alternatively, the video map may identify a segment from somewhere else within that video that can be “grafted” in place of the skipped segment to enhance the artistic seamlessness of a scene. *Id.* at col. 20, ll. 61–65. A grafted segment need not be of the same duration as the segment it replaces. *Id.*

Whatever specific filtering or editing action that may occur, if any, in Abecassis is defined at some later time in a different step of the process. The specific filtering action is not defined as part of the video map that also includes the start and stop positions, or duration, of content that may be filtered, as called for in the claims of the ’784 patent. At the end of the process, however, once the

viewer has selected specific filtering actions, as explained below, Abecassis provides the capability for the system to define a start position for a segment of multimedia content, a stop position for the segment, and a user initiated specific filtering action on the portion of the multimedia content defined by the start and stop positions. Indeed, Patent Owner admitted that Abecassis “accomplishes filtering.” Tr. 32, ll. 20–21 (“Q. Does Abecassis disclose filtering?” “A. It accomplishes filtering.”).

As explained in Abecassis, the disclosed editing system “is intended to significantly transfer censorship, and time-constrained editing decision making from the producer and/or editor to the viewer.” Ex. 1012, col. 22, ll. 22–26. Thus, the producer can maximize the content range of the video “to permit the creation of a greater number of versions of a video and thus appeal to a wider audience and to multiple viewings.” *Id.* at col. 22, ll. 26–29.

Figure 7A in Abecassis, shown below, illustrates the separate editing or filtering step performed by the user or viewer. Figure 7A illustrates a viewer’s content preferences selection screen 701 specific to the content of a selected video. *Id.* at col. 24, ll. 30–31.



**FIG. 7A**

Figure 7A from Abecassis shows a viewer’s selections from the video map.

As shown in Figure 7A, the viewer or user selects content categories 702, shown by bold boxes 703. *Id.* at col. 24, ll. 33–38. In Figure 7A, for example, by selecting “None” for the categories of profanity and bloodshed, the viewer has selected to filter or skip all content that includes any profanity or bloodshed. Thus, in this example, the video map of Abecassis provides for “the option of editing-out the explicit bloodshed” (*id.* at col. 20, ll. 13–15) and “skipping of the playing of a segment” (*id.* at col. 20, ll. 59–60).

*b. Malkin*

Malkin also discloses a system for editing multimedia video and audio. Ex. 1013, col. 2, ll. 44–52. The disclosed system allows the multimedia content to be “masked, filtered, or modified according to the user’s content specification.” *Id.* at col. 2, ll. 29–30. A control specification is created, which can be part of the multimedia stream or provided as a separate stream, to allow viewers to specify

content preferences. *Id.* at col. 2, ll. 53–62.

A control specification (reference numeral 237) “indicates how the stream content should be modified.” *Id.* at col. 12, ll. 59–62. “It provides instructions on showing the frames or groups of frames of the multimedia streams, [and] specifies blocking, omissions, and overlays.” *Id.* One type of control specification is a separate fuzz-ball track (reference numeral 337). *Id.* at col. 12, ll. 63–64. Another is an edit-decision list, “which indicates which frames to modify or replace.” *Id.* at col. 12, ll. 64–65.

In the Malkin system, third party mask providers provide pre-constructed frame-level masks (as will be discussed below with reference to FIG. 3A) that are used to modify the multimedia content to filter out undesired information. *Id.* at col. 4, ll. 7–12. For example, a client specifies in a video request to the third party provider a content specification “having a violence level value no higher than 3 and a nudity level value no higher than 2” for a particular video. *Id.* at col. 8, ll. 1–6. The appropriate mask, or control specification, is provided so that only the requested level of content is played. *Id.* at col. 8, ll. 1–30. Thus, in Malkin, a third party provides a single system that identifies the frames or groups of frames to be filtered *and also provides the filtering action* for the identified frames. In Abecassis, one party identifies content, and another party, the viewer, performs the filtering action.

Figure 3A in Malkin, shown below, depicts examples of a “fuzz-ball” and a fuzz-ball control specification. A “fuzz ball” can modify/mask one or more specified objects, such as a portion of a video frame or sample of audio, according to user specifications. *Id.* at col. 3, ll. 18–21. Figure 3A in Malkin illustrates a fuzz-ball control specification for a video stream comprising multiple frames.

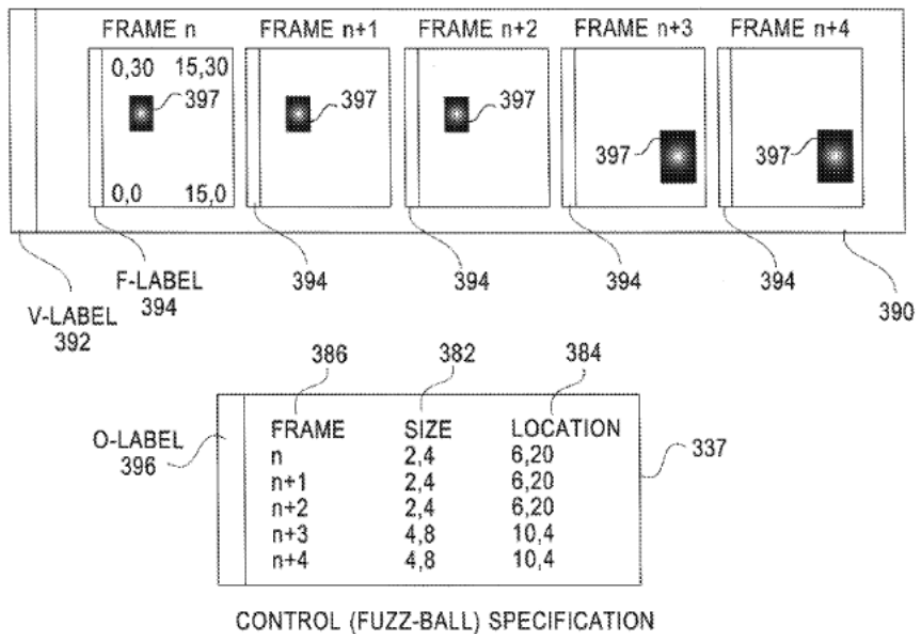


FIG.3A

Figure 3A of Malkin shows a fuzz-ball control specification.

Figure 3A depicts an example of a video stream having a series of adjacent frames, shown as “Frame n,” “Frame n+1,” . . . “Frame n+4.” *Id.* at col. 7, ll. 21–22. In the example shown in Figure 3A, control specification 237 is a separate “fuzz ball” track (reference numeral 337 in Fig. 3A). *Id.* at col. 7, ll. 23–25. Fuzz ball track 337 specifies a sequence of fuzz balls 397 having a size (382), location (384), and a temporal relationship (386) to the video stream (390). *Id.* at col. 7, ll. 32–35. Each frame has a “known dimension.” *Id.* at col. 7, l. 37.

The fuzz balls shown in Figure 3A are embodiments of control specification 237, which indicates how the stream content should be modified. *Id.* at col. 12, ll. 59–60. Control specification 237 “provides instructions on showing the frames *or groups of frames* of the multimedia streams, and specifies *blocking, omissions, and overlays.*” *Id.* at ll. 60–62 (emphases added). One type of control specification is fuzz-ball track 337. The control specification is transmitted as a separate stream or



file, such as a “fuzz-ball track” (reference numeral 337 in Fig. 3A). *Id.* at col. 8, ll. 42–44.

### 3. *Asserted Differences Between the Prior Art and Claims*

In determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 164 (Fed. Cir. 1985) (“It is elementary that the claimed invention must be considered as a *whole* in deciding the question of obviousness.”); *see also Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983) (“[T]he question under 35 U.S.C. § 103 is not whether the differences *themselves* would have been obvious. Consideration of differences, like each of the findings set forth in *Graham*, is but an aid in reaching the ultimate determination of whether the claimed invention *as a whole* would have been obvious.”).

As presented by the parties, we focus on the limitations in claim 1 requiring a “navigation object defining a portion of the multimedia content that is to be filtered by defining a start position, a stop position, and a specific filtering action to be performed on the portion of the multimedia content defined by the start and stop positions.”

Patent Owner focuses its arguments on Malkin. Patent Owner acknowledges that the fuzz balls in Malkin are a specific filtering action, but argues that Malkin discloses only “single frame (or single page) specific edits.” PO Resp. 5. Patent Owner admits, however, the “start” and “stop” positions defining the duration of content to be filtered in claim 1 “could correspond with a single frame,” but contends that Malkin does not do so because it does not specify two *different* positions. *Id.* at 6. Substantially all of Patent Owner’s argument is directed to the

assertion that Malkin does not disclose a “navigation object” with a start position, a stop position, and a specific filtering action to be performed on the portion of the multimedia content defined by the start and stop positions. *E.g.*, PO Resp. 8–9, 11 (arguing that “a single fuzz-ball cannot be a navigation object,” and “Malkin’s skipping, replacing, omitting, etc. also cannot be a navigation object because each type of filtering is associated with a single frame using a single frame identifier”).

Patent Owner’s proffered expert, Dr. Kiaei, also focuses on Malkin and opines that “Malkin implements this frame-by-frame fuzz-ball editing” (Ex. 2001 ¶ 48); “Malkin’s frame-by-frame method filters each frame individually” (*id.* ¶ 49); and “[a]ll editing in Malkin is performed on a single frame basis without requiring anything similar to a start or stop position” (*id.* ¶ 56). Dr. Kiaei also opines that “Malkin employs an entirely different technique to edit video content than is disclosed and claimed in the ’784 Patent.” *Id.* ¶ 58.<sup>5</sup>

Dr. Kiaei concludes that “because Malkin does not employ start and stop positions, Malkin’s techniques would be incapable of implementing a skip filtering action that starts at a start position and stops at a stop position.” *Id.* ¶ 57.

Patent Owner argues that the combination of Malkin and Abecassis does not teach or suggest each limitation of independent claim 1. Specifically, Patent Owner argues “the combination of Malkin and Abecassis does not teach or suggest a navigation object that defines the associated start position, stop position, and filtering action.” PO Resp. 43. According to Patent Owner, the references fail to identify any filtering action that is, or could be, “associated with both a start position and a stop position.” *Id.*

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<sup>5</sup> This is somewhat inconsistent with Patent Owner’s acknowledgement that “to a large extent regarding what Clearplay does, what Abecassis does, what Malkin does, is very similar.” Tr. 30, ll. 19–21.

Abecassis discloses start and stop positions for defining segments that may be edited or filtered. Ex. 1012, col. 20, ll. 4–6 (“Each segment 603 is defined by a beginning and ending frame and comprises any number of frames 604”). Patent Owner also acknowledges that the claimed start and stop positions of a navigation object can define a single frame. *See* Req. Reh’g. 8 (“[T]he start position of the navigation object identifies a position immediately before the frame while the stop position identifies a position immediately after the frame.”). The Abecassis system is intended to include a user-defined filtering action. *See, e.g.*, Ex. 1012, col. 22, ll. 22–26, col. 24, ll. 33–38, Fig. 7A. The evidence also is clear that Malkin discloses a specific filtering action to be applied to selected frames or groups of frames. *See, e.g.*, Ex. 1013, col. 12, ll. 59–62 (control specification 237 “provides instructions on showing the frames or groups of frames of the multimedia streams, and specifies blocking, omissions, and overlays”).

Thus, based on our analysis, and contrary to Patent Owner’s position, all the elements of the claimed navigation object are taught—start and stop positions from Abecassis, and a pre-defined filtering action included in the system for editing from Malkin. The dispositive issue is whether it would have been obvious to a person of ordinary skill in the relevant technology to include pre-defined skip filtering actions in Abecassis based on the disclosure in Malkin, rather than require the end-user to make all the filtering decisions. *See* Pet. Reply 7–8.

#### *4. Level of Ordinary Skill*

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“the level of skill in the art is a prism or lens through which a judge, jury, or the Board views the prior art and the claimed invention”). Dr. Kiaei opines that a person having ordinary skill in the art on October 23, 2000

would typically have (i) a M.S. degree in electrical engineering or computer science (or a related field) with at least a 2-3 years of experience working with signal, video, or data processing, or (ii) a B.S. in electrical engineering or computer science (or a related field) with significant practical experience (4 or more years) working with signal, video, or data processing.

Ex. 2001 ¶ 15. The prior art also reflects a skill level in the relevant technology. *Okajima*, 261 F.3d at 1355. Petitioner does not propose a specific level of ordinary skill. Based on the evidence, we agree with Dr. Kiaei and adopt the level of ordinary skill proposed by Dr. Kiaei.

#### 5. *Rationale to Combine*

Petitioner is relying on Malkin solely to teach a specific filtering action to be performed on the portion of the multimedia content defined by the start and stop positions. Tr. 97, ll. 1–3; *see* Pet. 15–24, 33–35. As a reason to combine Abecassis and Malkin, Petitioner asserts that “[b]oth references teach systems and methods for filtering offensive or otherwise undesirable content from multimedia content during playback,” are in the same field of endeavor, and deal with related subject matter. Pet. 28. Petitioner concludes that a person of ordinary skill in the art “would have readily known to combine the teachings of the two references, yielding ‘predictable variation[s].’” *Id.* (citing *KSR*, 550 U.S. at 417).

Patent Owner asserts that if Malkin’s single frame filtering actions were incorporated into Abecassis’s teachings, “it would not yield a navigation object.” PO Resp. 41 (citing Ex. 2001 ¶ 66). According to Patent Owner, “it would yield two redundant techniques for editing that are not compatible.” *Id.* Dr. Kiaei opines that the editing technique of Malkin “would not be compatible with the editing technique of Abecassis” (Ex. 2001 ¶ 65) and that the two editing techniques are “fundamentally different” (*id.* ¶ 68).

Patent Owner bases its position on the mistaken premise that the entire Malkin system would be grafted onto the entire Abecassis system. PO Resp. 41 (“[I]f Malkin’s single frame filtering actions were incorporated into Abecassis’s teachings, . . . it would yield two redundant techniques for editing that are not compatible.”). The obviousness inquiry, however, does not ask whether the references could be physically combined, but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole. *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (assertions that two references cannot be combined “are basically irrelevant, the criterion being not whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole”). Rather, in a case such as this, where each of the elements of the claim is known in the art, the obviousness inquiry requires a determination whether the combination of known elements would have been obvious to a person with ordinary skill in the art.

As stated in *KSR*, the question we must ask is “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417. In determining whether a patent claiming a combination of elements would have been obvious, the Supreme Court made clear that the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ. *Id.* at 418. “[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 420. As discussed above, based on education and experience, a person of ordinary skill in the relevant technology would have been sophisticated in the relevant technologies, with a background in electrical engineering, computer science, or a related field and with

experience in signal, video, or data processing. We also recognize that “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at 421. Moreover, “[a] reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect.” *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985) (emphasis omitted).

Here, it is clear, based on the reference disclosures, that Abecassis discloses filtering actions taken with respect to the segments defined by start and stop positions (but not included with the positions in a single “navigation object”). Whether those filtering actions are provided by the end-user, as suggested by Abecassis, or are pre-programmed as part of the video map, as suggested by Malkin, would have been an obvious choice for a person of ordinary skill and creativity.

The rationale for the modification comes from the references. First, Abecassis identifies the desirability of incorporating “capabilities and environments that automatically customize the playing of videos to satisfy the requirements” of various viewers, and that deliver “a more enjoyable video experience without requiring the level of active participation inherent in interactive systems.” Ex. 1012, col. 1, ll. 45–52. Abecassis also states the desirability for “automated selective retrieval of non-sequentially stored, parallel, transitional, and overlapping video segments” (*id.* at col. 2, ll. 1–3); “automated capabilities for efficiently retrieving and playing only a specified class, category, or subject matter included in segments within the selected video” (*id.* at col. 2, ll. 50–53); and “intermittent content skipping methods” (*id.* at col. 3, l. 2).

Malkin similarly points out that the prior art includes “various systems directed towards storing user preferences to select correspondingly encoded

videos, and/or video streams.” Ex. 1013, col. 1, ll. 56–58. These systems include “both time and content controls for multiple and variable numbers of viewers.” *Id.* at col. 2, ll. 10–12. Malkin states that there was a need for a system for “flexibly modifying multimedia content so that specific objects, for example a portion of a single video frame or sample of audio, can be dynamically masked, filtered, or modified according to the user’s content specification.” *Id.* at col. 2, ll. 26–30. Malkin cites specifically to a related Abecassis patent, U.S. Patent No. 5,434,678,<sup>6</sup> as an example of a system that can be improved by the Malkin system. *Id.* at col. 2, ll. 14–25; *see* Pet. 23–24; *see also* Tr. 7, l. 15–Tr. 9, l. 22 (describing generally that “Malkin itself provides the motivation” (Tr. 8, l. 22)).

Second, Abecassis’s use of skipping provides a reason why a person of ordinary skill in the art would have looked to Malkin. Petitioner argues that “in the context of a system, like Abecassis, that provides editing out benefits for a video, a video map comprising segment[] definitions and descriptors, including content codes of possibly objectionable content (e.g., bloodshed) implicitly specifies a distinct filtering operation.” Pet. 17. Specifically, “including a ‘skip’ designation in a map with the other descriptors is nothing more than a design choice to make explicit what is implicit and obvious.” *Id.* at 18 (emphasis omitted). As Petitioner correctly points out, the video map in Abecassis includes codes and descriptors with “logical entry and exit references,” “linkages of segments, and/or pointers among segments,” such that segments may be linked to each other, skipping video content in between the segments. *Id.* at 18–21 (citing Ex. 1012, col. 16, ll. 26–27, col. 20, ll. 15–19, col. 21, l. 62, col. 22, ll. 6–8, col. 33, ll. 56–61). Skipping is a type of filtering action, and is specifically recited in claim 5 of the ’784 patent, for

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<sup>6</sup> U.S. Patent No. 5,434,678 is incorporated by reference in Abecassis. Ex. 1012, col. 4, l. 26–27.

example. Abecassis teaches skipping portions of multimedia content, as well as including information with the segments of the video map to implement the skipping. *E.g.*, Ex. 1012, Abstract (disclosing “skipping, responsive to the replay request, the video to a replay position that is responsive to a preestablished replay preference”). As explained in Abecassis,

the application of the viewer’s content preferences to the video map results in the automated logical selection of sequential and non-sequential segments of the selected video 924 consistent with the viewer’s video content preferences and the video map. In other words, any segments with a content coding higher (abstract) than the viewer-selected content preference for the corresponding category would not be included in the video produced for the viewer. The segment selected for viewing having a coding level equal to or lower than the viewer specified content preference for that category is selected and provides, where necessary, the next segment beginning frame information. *This will skip over parallel segments of a lower coding than the viewed segment.*

*Id.* at col. 33, ll. 48–61 (emphasis added).

We are persuaded that the above disclosures would have suggested to a person of ordinary skill in the art that skipping could be included as a distinct filtering action in a navigation object, as taught by Malkin.

Patent Owner responds that in Abecassis, skipped frames “are never assigned a content rating or defined with start and stop positions.” PO Resp. 52. Therefore, according to Patent Owner, Abecassis does not teach a navigation object comprising a start position, stop position, and filtering action. *Id.* Regardless of whether the skipped frames actually are included in the video map of Abecassis with corresponding start and stop positions, Abecassis discloses linking the end of one segment to the beginning of another, such that content in between would be skipped. We are persuaded that this teaching at least would have



prompted a person of ordinary skill in the art to look to a reference like Malkin, which includes a similar filtering action in the object itself.

Patent Owner argues “the category rating does not apply to frames that are being defined to be omitted from playback.” PO Resp. 52 (citing Ex. 2001 ¶ 65). Patent Owner asserts that “under Abecassis, these omitted frames are never assigned a content rating or defined with start and stop positions.” *Id.* (citing Ex. 1012, col. 33, ll. 48–67). The cited portion of Abecassis does not support Patent Owner’s position. The cited disclosure states

[i]n a preferred embodiment, *the application of the viewer’s content preferences to the video map* results in the automated logical selection of sequential and non-sequential segments of the selected video 924 consistent with the viewer’s video content preferences and the video map.

Ex. 1012, col. 33, ll. 48–52 (emphasis added). The video map itself defines segments within a video, including the beginning and ending of each segment and the segment’s content category code or descriptor. *Id.* at col. 16, ll. 13–36. In Abecassis, it is only *after* the application of the viewer’s content preferences to the defined segments on the video map that the defined segments are skipped. Contrary to Patent Owner’s assertion, the skipped segments in Abecassis are skipped because they contain a content category that the viewer has selected for editing.

Dr. Kiaei opines similarly that, if combined with Malkin, Abecassis’s “[s]equences that contain objectionable content would not be included in the video map.” Ex. 2001 ¶ 65 (citing Ex. 1012, col. 20, ll. 1–25). The cited portion of Abecassis does not support Dr. Kiaei’s opinion. In the cited portion, Abecassis refers to the example in Figures 6A–6D. As described in Abecassis, the various scenes or chapters of the video are divided into appropriate segments according to

the evaluation or coding of the contents of the scenes or chapters. Ex. 1012, col. 20, ll. 1–4. *Each segment* is defined by a beginning and ending frame and comprises any number of frames. *Id.* at col. 20, ll. 4–6. Contrary to Dr. Kiaei’s opinion, Abecassis states that this video map, with each segment defined and coded for its content, provides “for the option of editing-out” or skipping segments and content according to the viewer’s preferences. *Id.* at col. 20, ll. 13–17. Thus, as stated above, the skipped or omitted segments have a descriptor or content category. They are skipped or omitted because of the application of the viewer’s content preferences to the video map. Thus, we are not persuaded by Patent Owner’s argument that a person of ordinary skill in the art could not have combined the teachings of Abecassis and Malkin.

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that it would have been obvious to modify Abecassis to include a pre-defined filtering action, as disclosed in Malkin, such that the combined teachings of the references would result in a navigation object containing a start position, stop position, and specific filtering action. Accordingly, we determine that claim 1 would have been obvious based on Abecassis and Malkin.

#### 5. *Dependent Claims 2 and 4–9*

Claims 2 and 4–9 each depend from claim 1. Patent Owner argues generally that “[b]ecause the combination of Abecassis and Malkin fails to teach or suggest a navigation object or the use of a navigation object to edit content, it also cannot teach or suggest the limitations of the dependent claims.” PO Resp. 48.

Claim 2 requires that in response to a request from the consumer system, the server system retrieves one or more navigation objects. Petitioner asserts that both Abecassis and Malkin disclose retrieving data from a remote server. Pet. 38–39. Patent Owner asserts that because neither Abecassis nor Malkin disclose or suggest

navigation objects, which is contrary to our determination above, the combination of references also cannot teach or suggest the limitations of claim 2. PO Resp. 48.

Based on Petitioner's arguments, and our analysis above of the "navigation object" limitation, a preponderance of the evidence establishes that claim 2 would have been obvious.

Claim 4 requires the start position and stop position to be expressed as time codes. Petitioner asserts Abecassis discloses time codes to define start and stop positions. Pet. 41 (citing Ex. 1012, col. 21, ll. 50-55 ("[S]egment definitions need not be based on frame numbers, any timing or logging format, or physical addressing format, that defines the video material may instead or in addition [may] be utilized.")). Petitioner also asserts that Malkin discloses time codes. *Id.* (citing, e.g., Ex. 1013, col. 13, ll. 1-4 ("A control specification at a level of group of frames or the video header can be time-based so that the specific frame can be identified by the timing information.")). Petitioner concludes it would have been obvious to substitute a frame-number timing format for any other timing format as suggested by Abecassis, and taught by Malkin. *Id.* at 42.

Patent Owner asserts that the cited references do not disclose or suggest start and stop positions. PO Resp. 49. This assertion is contrary to our analysis above. Based on all of the evidence of record, we determine, by a preponderance of the evidence, that claim 4 would have been obvious over Abecassis and Malkin.

Claim 5 depends from claim 1 and further requires that the filtering action specified in at least one of the navigation objects is skipping a portion of the multimedia content. As explained above, we are persuaded that Abecassis discloses the skipping of portions of multimedia content, and that Abecassis combined with Malkin teaches a navigation object comprising a start position, stop

position, and skip filtering action. *See supra* Section II.B.4; Pet. 42; Ex. 1012, col. 20, ll. 13-25, 59–60; Tr. 96–97.

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that claim 5 would have been obvious over Abecassis and Malkin.

Claim 6 requires the filtering action specified in at least one of the navigation objects to be muting audio content.

Petitioner asserts that Abecassis and Malkin both disclose muting audio content. Pet. 43–44 (citing Ex. 1012, col. 45, ll. 59–62 (sounds of a scene may be “filtered to exclude”), Ex. 1013, col. 13, ll. 4–8 (“[T]he masking/modification of the multimedia stream content is presented in terms of real-time video stream delivery, but the same concept is applicable to any other type of multimedia stream which may include multiple streams of video and/or audio.”)).

Patent Owner repeats its position, rejected above, that the references do not disclose or suggest a filtering action associated with start and stop positions. PO Resp. 52–53.

Based on all of the evidence of record, we determine, by a preponderance of the evidence, that claim 6 would have been obvious over Abecassis and Malkin.

Claim 7 requires access to the server system to be governed by a fee agreement, and receiving a fee from a user at the consumer system, wherein the fee entitles the user to access the server to obtain one or more navigation objects. Petitioner asserts that Abecassis provides for fee agreements by disclosing that “billing” information is provided to the user. Pet. 44–46. Petitioner concludes that “[m]erely adding an obvious and well known monetizing methodology limitation to an unpatentable invention cannot possibly give rise to patentable subject matter.” *Id.* at 45.

Claim 8 requires the navigation objects to be based at least in part on the age appropriateness of the multimedia content. Petitioner asserts that Abecassis discloses using the Motion Picture Association of America's (MPAA) movie rating system or some other available rating systems, including, for example, the rating system advanced by the Film Advisory Board, or any age-based (e.g., Adult) or class-based (e.g., Family) rating system. Pet. 46–47. Petitioner also asserts that Malkin discloses age-based editing. *Id.*

Claim 9 requires the step of downloading a multimedia navigator from the server system, the navigator activating the filtering actions of the navigation objects at the consumer system. Petitioner asserts that this step is disclosed in both Abecassis and Malkin and is “another example of adding an obvious collateral limitation that should not render patentable otherwise unpatentable subject matter.” Pet. 47–48.

For claims 7, 8, and 9, Patent Owner argues that “the combination of Abecassis and Malkin fails to disclose or suggest a navigation object.” PO Resp. 53.

Based on the preponderance of the evidence and our analysis above, we determine that claims 7, 8, and 9 would have been obvious.

#### 6. *Objective Indicia of Non-obviousness*

Patent Owner argues, without citation of any supporting evidence, that “secondary considerations [of commercial success] support the validity of the claims.” PO Response 53–54. Objective criteria, such as commercial success, constitute independent evidence of non-obviousness. *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1378 (Fed. Cir. 2013). The objective indicia, however, must establish a nexus with the claimed subject matter. *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311–12 (Fed. Cir. 2006). Here, Patent Owner provides

argument, but no evidence, of the alleged commercial success.<sup>7</sup> *See, e.g.*, PO Resp. 54 (“Since 2001, [Patent Owner] has had gross sales of \$21 million.”). Patent Owner also fails to provide any evidence that the alleged commercial success is due to the patented invention rather than other factors.

### III. CONCLUSION

Based on the evidence and arguments, Petitioner has demonstrated, by a preponderance of the evidence, that claims 1, 2, and 4–9 of the ’784 patent are unpatentable under 35 U.S.C. § 103 based *Abecassis* and *Malkin*.

### IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that, based on Petitioner’s showing by a preponderance of the evidence, claims 1, 2, and 4–9 are unpatentable.

This is a final decision. Parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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<sup>7</sup> “Argument in the brief does not take the place of evidence in the record.” *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965).

IPR2014-00339  
Patent 7,526,784 B2

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