

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TIKTOK INC. et al,  
Petitioner,

v.

NTECH PROPERTIES, INC.,  
Patent Owner.

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IPR2024-01339  
Patent 9,317,597 B2

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Before KEN B. BARRETT, TERRENCE W. MCMILLIN, and  
SCOTT RAEVSKY, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. *Background and Summary*

TikTok Inc. (“Petitioner”)<sup>1</sup> filed a Petition for *inter partes* review of claims 1–20 of U.S. Patent No. 9,317,597 B2 (Ex. 1001, “the ’597 patent”). Paper 2 (“Pet.”). NTECH Properties, Inc. (“Patent Owner”)<sup>2</sup> filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition and the Preliminary Response, as well as the evidence of record, we deny institution of *inter partes* review of the ’597 patent.<sup>3</sup>

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<sup>1</sup> Petitioner identifies TikTok Inc., Bytedance Ltd., Bytedance Pte. Ltd., and TikTok Pte. Ltd. as real parties-in-interest. Pet. 2.

<sup>2</sup> Patent Owner identifies itself, NTECH Properties, Inc., as the real party-in-interest. Paper 4 (Patent Owner’s Mandatory Notices), 1.

<sup>3</sup> In addition to the Petition and Preliminary Response, Petitioner’s Preliminary Reply (Paper 7) and Patent Owner’s Preliminary Sur-reply (Paper 8) were filed. However, these papers were limited to arguments related to discretionary denial under 35 U.S.C. § 325(d). We do not reach the issue of discretionary denial in light of our decision to deny institution on the merits.

*B. Related Proceeding*

The parties identify the following district court matter related to the '597 patent: *NTECH Properties, Inc. v. ByteDance Ltd. et al.*, Case No. 2:24-cv-00130 (E.D. Tex., filed Feb. 23, 2024). Pet. 2; Paper 4.

*C. The '597 patent (Ex. 1001)*

The '597 patent<sup>4</sup> is titled “Method and Apparatus for Efficient, Entertaining Information Delivery.” Ex. 1001, code (54). The '597 patent “relates to the field of information delivery.” *Id.* at 1:25–27.

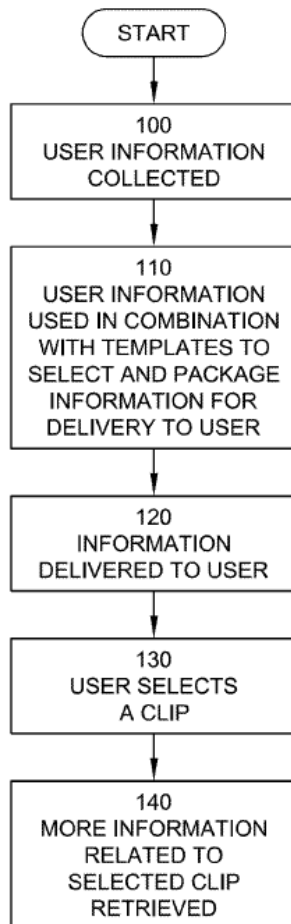
According to the description of the invention’s background, “[t]ypical information delivery systems (e.g., the WorldWide Web, video on demand, television, etc.) provide information to users inefficiently.” *Id.* at 1:31–33. For example, “in a [video on demand (VOD)] system, the user is able to select desired content” but the “user must search through and select from a list of available content.” *Id.* at 1:59–64.

“Embodiments of the present invention are directed to a method and apparatus for efficient, entertaining information delivery.” *Id.* at 2:9–11. “[I]nformation is partitioned into clips . . . selected for a user and packaged together for presentation to the user in an entertaining manner . . . accordan[t] with a template.” *Id.* at 1:11–15. “The user may select a clip to retrieve additional information related to the clip.” *Id.* at 2:24–25. “[T]he selected clip is a portion of a program (e.g., a television show, a movie, a song, an advertisement, etc.) and the additional information is a larger clip of the program and/or the entire program.” *Id.* at 2: 25–29.

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<sup>4</sup> The '597 patent is a continuation of Application No. 13/195,709, which is now U.S. Patent No. 8,875,185 challenged in IPR2024-01338.

Figure 1, reproduced below, “is a flow diagram of the process of delivering information in accordance with one embodiment of the present invention.” *Id.* at 2:49–51.



At block 110, “the user information is used in combination with templates to select and package the information for delivery to the user,” e.g., “concatenating clips together to form a stream of data.” *Id.* at 3:31–39. At blocks 120 and 130, respectively, “the information is delivered to the user” and “the user selects a clip.” *Id.* at 3:42–45. At block 140, “more information related to the selected clip is retrieved,” e.g., “the selected clip is a portion of a media program . . . and the entire media program is retrieved.” *Id.* at 3:45–49.

*D. Challenged Claims*

Petitioner challenges claims 1–20 (all) of the '597 patent. Pet. 4. Sole, independent claim 1 recites (Petition's identifiers of limitations inserted in brackets):

- 1[pre] 1. A method of providing video programming to a user, comprising the steps of:
- 1[a] (a) receiving a first request for video programming at a computing device comprising a video server, by communication with a computing device associated with a user;
- 1[b] (b) searching one or more databases of video clips based on the first request, wherein each said database is in communication with said video server computing device;
- 1[c] (c) receiving one or more first search results at said video server computing device, wherein said first search results collectively correspond to a plurality of first video clips in said one or more databases, each of which is responsive to the first request, and wherein at least some of said responsive first video clips are each associated with one or more second video clips in said one or more databases;
- 1[d] (d) identifying a plurality of first transitional clips in said one or more databases for association with at least some of said responsive first video clips;
- 1[e] (e) defining first video programming comprising a selected plurality of said responsive first video clips and a selected plurality of first transitional clips that are concatenated according to a first temporal sequence;
- 1[f] (f) providing a presentation of said first video programming to a display associated with said user computing device;
- 1[g] (g) receiving an identification of a first video clip of said first video programming at said video server computing device;
- 1[h] (h) searching said one or more databases of video clips according to a second request for second video programming

that is based at least in part on a stored association between the identified first video clip and at least one second video clip;

- 1[i] (i) receiving one or more second search results at said video server computing device, wherein said second search results collectively correspond to a plurality of second video clips in said one or more databases that are responsive to the second request, including at least one second video clip that is associated with the identified first video clip;
- 1[j] (j) identifying a plurality of second transitional clips in said one or more databases for association with at least some of said responsive second video clips;
- 1[k] (k) defining second video programming comprising a selected plurality of second video clips, including the designated second video clip, and a selected plurality of second transitional clips that are concatenated according to a second temporal sequence; and
- 1[l] (j [sic]) presenting said second video programming to a display associated with said user computing device;
- 1[m] wherein at least one searching or defining step is performed according to one or more templates which collectively comprise a plurality of template variables comprising (a) information about a user associated with the second computing device, (b) viewing scenarios of two or more selected video clips in a temporal relationship to each other, and (c) “style requirements”.

Ex. 1001, 4:55–5:46.

#### *E. The Asserted Grounds*

Petitioner challenges claims 1–20 of the ’597 patent based on the grounds set forth in the table below.

|   | <b>Claims<br/>Challenged</b> | <b>35 U.S.C. §</b>  | <b>Reference(s)/Basis</b>                         |
|---|------------------------------|---------------------|---------------------------------------------------|
| 1 | 1–20                         | 103(a) <sup>5</sup> | Marcus156 <sup>6</sup> , Harbick <sup>7</sup>     |
| 2 | 1–20                         | 103(a)              | Marcus156, Harbick, Hosken <sup>8</sup>           |
| 3 | 8, 16                        | 103(a)              | Marcus156, Harbick,<br>Hosken, Byers <sup>9</sup> |
| 4 | 1–7, 9–15,<br>17–20          | 103(a)              | Ferman <sup>10</sup> , Harbick                    |
| 5 | 8, 16                        | 103(a)              | Ferman, Harbick, Byers                            |

Pet. 4.

Petitioner supports its showing of unpatentability of the challenged claims of the '597 patent with the Declaration of Dr. Kevin Almeroth (Ex. 1002).

## II. OBVIOUSNESS ANALYSIS

### *A. Principles of Law*

Under 35 U.S.C. § 103(a), “[a] patent claim is unpatentable if the differences between the subject matter sought to be patented and the prior art

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<sup>5</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103, and was effective on March 16, 2013. The application for the '597 patent is a U.S. continuation application of U.S. Ser. No. 13/195,709, filed on August 1, 2011, which is a U.S. continuation application of U.S. Ser. No. 10/874,819 filed June 23, 2004 (and now abandoned). Ex. 1001, 1:8–11. Because the '597 patent claims a priority date before the effective date of the applicable AIA amendment, we assume the pre-AIA version of § 103 applies for purposes of institution.

<sup>6</sup> US 6,032,156, issued Feb. 29, 2000 (Ex. 1009).

<sup>7</sup> US 8,260,656 B1, issued Sept. 4, 2012 (Ex. 1010).

<sup>8</sup> WO 01/06398 A2, published Jan. 25, 2001 (Ex. 1013).

<sup>9</sup> US 7,334,249 B1, issued Feb. 19, 2008 (Ex. 1014).

<sup>10</sup> US 2002/0059584 A1, published May 16, 2002 (Ex. 1012).

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) (similar language). The question of obviousness involves resolving 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 ordinary skill in the art; and when presented (4) objective evidence of non-obviousness (not presented here). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Further, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See KSR*, 550 U.S. at 418.

*B. Level of Ordinary Skill in the Art*

Petitioner contends:

A person of ordinary skill in the art at the time of the ’597 patent (“POSITA”) had at least a Bachelor of Science in electrical engineering, computer engineering, or similar fields and at least two years of practical experience in the field of media processing and/or transmission. More education can supplement for less practical experience, and vice versa.

Pet. 4–5. Patent Owner does not dispute Petitioner’s description.

Prelim. Resp. 26.

Determining the level of ordinary skill in the art involves various factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). The prior art of record also reflects the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

For purposes of this Institution Decision, we adopt the description offered by Petitioner. It is not disputed by Patent Owner and is consistent with the '597 patent and the asserted prior art.

*C. Claim Construction*

In *inter partes* reviews, the Board construes claims using the same claim construction standard employed in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). The “words of a claim ‘are generally given their ordinary and customary meaning,’” as would have been understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Neither the Petition nor Preliminary Response requests express claim construction. Pet. 5; Prelim. Resp. 26. And, no need exists to expressly construe any claim terms to resolve this dispute. *See 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 Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*D. Analysis of Grounds Relying on Marcus 156 and Harbick*

In asserted grounds 1–3, Petitioner challenges all the claims of the

'597 patent as obvious based on combinations of the teachings in cited art that consist of, or include, Marcus156 and Harbick. Pet. 4, 8–41. For these grounds, Petitioner alleges that the combination of Marcus156 and Harbick teaches or suggests limitations of sole independent claim 1<sup>11</sup> that we determine are not taught or suggested by Marcus156 and Harbick. Accordingly, we determine that there is not a reasonable likelihood that Petitioner would prevail with respect to any claim of the '597 patent based on any of the grounds relying on Marcus156 and Harbick.

We start our analysis of these grounds with a description of the disclosures of Marcus156 and Harbick then consider whether Marcus156 and Harbick teach or suggest certain limitations of claim 1 of the '597 patent.

*1. Marcus156 (Ex. 1009)*

Marcus156 is titled “System for Automated Generation of Media.” Ex. 1009, code (54). Marcus “relates to . . . creation of audiovisual programming.” *Id.* at 1:11–13.

According to the description of the invention’s background, the art already included a “capacity to design customized audio visual programs for specific purposes from a library of existing video clips and audio elements.” *Id.* at 1:16–19. However, “a human editor must make the ultimate selection of individual clips[,] provide the final editing decisions, [e.g.,] creation and selection of transitions so that there is a smooth visual and audio transition

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<sup>11</sup> Claim 1 is the sole independent claim of the '597 patent. Ex. 1001, 4:55–6:57. Claims 2–20 depend, directly or indirectly, on claim 1. *Id.* at 5:47–6:57. By virtue of their dependency on claim 1, claims 2–20 incorporate the limitations of claim 1. Accordingly, all the challenged claims include the limitations of claim 1 discussed in this decision.

between adjoining clips in the program, and check[] the content of the clips to determine that there is proper coverage of the appropriate subject matter in an appropriate sequence.” *Id.* at 1:39–48.

Marcus156’s system provides, in response to a request for media programming, automated selecting of media elements and their temporal organization. *Id.* at 2:1–3. “The system selects and orders the media elements according to the data in the request[] and . . . permitted transitions[] regarding the media elements.” *Id.* at 2:6–9. “[E]ach clip . . . has associated therewith additional information often arranged in a hierarchical manner.” *Id.* at 3:1–3. “Individual items of information within [a] header[,] referred to . . . as tags[,] . . . are divided into two general categories[—]namely control tags 115 and content tags 120.” *Id.* at 3:4–7. “Content tags [] contain information identifying the content of the clip[:] . . . information communicated by the clip[;] . . . viewer profiles for viewers most likely to be receptive to the clip[;] . . . and intended use of the clip.” *Id.* at 3:7–13. “[C]ontrol tags define audio and video components of clips[;]” video control tags and audio control tags each identifying respective transition points, e.g., “an optimum transition point from the beginning of the clip.” *Id.* at 5:3–10. Additionally, optional tags can indicate a luminance range, dominant chroma value, key of music, and tempo of music for the opening and closing of a clip. *Id.* at 5:26–35.

The system includes an “editor program” that produces an edit decision list (EDL) based on a topic and demographics for user/s of media programming. *Id.* at 6:65–7:3. Generally, to create a program, the editor program selects clips, revises their order, determines transitions between clips, and inserts the transitions. *Id.* at 7:4–9. The editor program thus

“makes transition selections at the beginning and end of the audio and video portions of each clip.” *Id.* at 8:32–35. And, if there is an incompatibility, the editor discards an element and replaces it with a substitute element.” *Id.* at 8:36–38.

In one embodiment, a user of the system creates queries, the different items therein are weighted, and the editor program identifies suitable templates and sequences for clips based on the items as weighted. *Id.* at 9:9–15. As part thereof, the editor program selects templates each identifying demographic characteristics, information to be conveyed, and sequential requirements required for a program. *Id.* at 8:14–19. “Truth tables” of the editor program select and order one or more suitable modules and floater sequences. *Id.* at 8:23–24; *see also id.* at 4:28–31 (floaters are elements “free to float temporally in order to accomplish certain transitions”). The truth tables also “determine whether a direct transition between any two clips meets aesthetic requirements,” e.g., “if the keys of the music in two adjacent clips are incompatible,” and, “[i]f not, identify a suitable type of transition for both clips, add a bridge between the clips, or determine that one of the clips must be discarded.” *Id.* at 8:48–55.

## 2. *Harbick (Ex. 1010)*

Harbick is titled “Mining of User-Generated Playlists for Data Regarding Relationships Between Digital Works.” Ex. 1010, code (54). Harbick “relates to methods for remotely monitoring the digital works consumed by users on their devices and for using such information to provide personalized recommendations or other targeted content to users.” *Id.* at 1:23–26.

According to the description of the invention's background, "[o]ne limitation with existing player devices is that they generally do not provide or support an intelligent mechanism for identifying, based on the works the user has played or stored on a user device, other works that may be of interest to the user." *Id.* at 1:41–45. "[M]any recommendation services are incapable of making accurate recommendations until the user has explicitly created a preferences profile, or has purchased a sufficient number of products to permit an accurate profile to be created." *Id.* at 1:50–53.

Harbick's system "receives user-generated playlists from . . . a plurality of users" and "detects relationships between particular digital works at least partly by determining how frequently particular digital works co-occur on the playlists." *Id.* at 1:62–67. "[T]hough the user may play works downloaded from many different web sites . . . , all of these works may be taken into consideration in selecting additional works to recommend to that user." *Id.* at 2:10–12.

"Recommendations are typically provided according to product IDs, which may or may not correspond directly[; e.g.,] . . . individual songs . . . may [be] identif[ied with] product IDs for entire CDs." *Id.* at 6:47–25. That is, "generating personalized recommendations based on metadata extracted from works consumed on player devices involves effectively identifying a product ID . . . that best corresponds to the work." *Id.* at 6:30–34. Then, "[t]he recommendations application 42 [may] access[] a similar products mapping table 72 that maps . . . (1) a product ID for a first product, and (2) a list of the product IDs for the products deemed to be the most similar to the first product." *Id.* at 6:59–64.

“In one embodiment, the recommendations plug-in 34 in the user PC 30 operates generally by continuously “listening to determine whether the currently playing track has changed.” *Id.* at 7:7–9. “[T]he plug-in 34 first attempts to identify a DiscID . . . from the CD’s table of contents . . . [and then] Album/Artist/Track information from . . . ID3 tags encoded in the file.” *Id.* at 7:13–18. “[O]nce the plug-in 34 has generated some form of identifying metadata . . . , the plug-in 34 encodes the resulting DiscID and/or Album/Artist/Track information or other metadata into a URL (Uniform Resource Locator) associated with the recommendations application 42[] and passes this URL to the mini browser 54.” *Id.* at 7:23–29. “The receipt of the URL causes the mini-browser 54 to generate an HTTP GET request for the given URL.” *Id.* at 7:29–30. “In response to the HTTP GET request . . . , the web server 60 passes on a request to the recommendations application 42 to generate a list of associated recommended works,” e.g., “[by] access[ing] the user profiles database 44, the similar products mapping table 72, and the DiscID-to-ProductID mapping table 70.” *Id.* at 7:52–58.

### 3. *Limitation 1[g]*

Limitation 1[g] of claim 1 recites:

*receiving an identification of a first video clip of said first video programming at said video server computing device;*

Ex. 1001, 5:15–17. The entire presentation in the Petition as to this limitation provides:

#### ***Receiving identification of video clip at video server:***

Marcus156 discloses that a user can identify a first video clip in the first video programming by a mouse clip [sic] to trigger a second search. Marcus156 at 14:35-43; 14:46-55. The “List Editor/Previewer” has a UI to identify video clips. *Id.* at 7:11-

15.<sup>[12]</sup> In general, Marcus156's system supports "viewer input" to search for video. *Id.* at 14:59-67; Almeroth ¶¶198-200.

In the combined system of Marcus156 and Harbick, the video server would receive this identification from the user computing device. For example, Harbick discloses reporting an identification of played items (which could have been in the first search result set/first video programming) to the server. Harbick at 6:20-22 ("metadata of...television shows"); Almeroth ¶201.

Pet. 21. We have reviewed all the passages in Marcus156 and Harbick cited by Petitioner and do not find support for Petitioner's contention that the cited art teaches or suggests this limitation. We also determine that Petitioner has failed to clearly or persuasively explain its contention that the cited art discloses this limitation.

Petitioner contends that "[i]n the combined system of Marcus156 and Harbick, the video server would receive this identification from the user computing device" and cites as an example a passage in Harbick (Ex. 1010, 6:20–22). We do not understand how or why the cited passage in Harbick supports Petitioner's contention that this limitation is taught or suggested by the cited art. The cited passage in Harbick provides: "the player device 30

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<sup>12</sup> We do not understand how or why the statement that "[t]he 'List Editor/Previewer' has a UI [user interface] to identify video clips" or the citation to Ex. 1009, 7:11–15, relates to the limitation. Petitioner fails to provide any such explanation. The cited passage in Marcus156 provides: "The List Editor/Previewer 430 is the GUI designed to provide the production editor with the ability to change, add to and preview the EDL that has been produced by the editor program 425 in response to information entered in the Patient Profile Entry Interface 415." Ex. 1009, 7:11-15. This passage relates to the production editor (not the user) reviewing and editing a video prior to its presentation to the user. We determine that this statement and cite do not provide any support for its contention that this limitation is taught or suggested by the cited art.

may be configured to recognize and to report metadata of individual songs or television shows played.” Ex. 1010, 6:20–22. We do not discern how the player device recognizing and reporting that a song or television show was played supports Petitioner’s contention that this limitation is taught or suggested by Harbick or the combination of Marcus156 and Harbick. There is no support provided for the statement that “[i]n the combined system of Marcus156 and Harbick, the video server would receive this identification from the user computing device.” See Pet. 21.

Petitioner cites the Alermoth Declaration, paragraphs 198–201, but does not explain the content or pertinence of this testimony. See Pet. 21. We have reviewed this testimony and determine that it is conclusory. This testimony repeats, almost verbatim, the language in the Petition without any further explanation or supporting reasoning or evidence. See Ex. 1002 ¶¶ 198–201. We accord this testimony little or no weight. See *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1378 (Fed. Cir. 2021) (“We do not accord weight to conclusory expert testimony.”); see also 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

We determine that Petitioner fails to establish a reasonable likelihood of showing that Marcus156 and Harbick teach or suggest limitation 1[g].

#### 4. Limitations 1[h] and 1[l]

Limitations 1[h] and 1[l] of claim 1 recite:

*searching said one or more databases of video clips according to a second request for **second video programming** that is based at least in part on a stored association between the*

*identified first video clip and at least one second video clip*

...

*presenting said **second video programming** to a display  
associated with said user computing device.*

Ex. 1001, 5:18–22, 5:38–39 (emphasis added). The presentation in the  
Petition as to limitation 1[h] provides:

***Searching databases of video clips according to second  
request for second video programming:*** When the user  
interacts with video programming that was already generated by  
the system, Marcus156’s system performs additional interactive  
searches and generates a new stream of video programming.  
Marcus156 at 14:40-45 (new search performed based on  
displayed information from first search); 14:46-55 (user click  
on screen of first search results triggers second search); 7:11-  
15<sup>[13]</sup> (List Editor/Previewer 430 can change video  
programming in response to user interaction).

Pet. 22. The presentation in the Petition as to limitation 1[l] provides:

***Presenting second video programming on user  
computing device’s display:*** After performing a second search  
and defining second video programming, the programming is  
presented on a display associated with the user computing  
device, just like the first video programming. Marcus156 at  
14:52-55; 14:61-67; Almeroth ¶215. Additional detail is in  
1[f].

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<sup>13</sup> Patent Owner correctly asserts that this citation to Marcus 156, 7:11–15, relates to the List Editor/Previewer described in Marcus156 that is utilized by the production editor of a video program and does not relate to “chang[ing] video programming in response to user interaction” as indicated in the parenthetical of this citation. Prelim. Resp. 31–32. The parenthetical is inaccurate and Petitioner provides no explanation as to how or why this citation supports its contention that Marcus156 teaches or suggests limitation 1[h].

Pet. 24. We determine that Petitioner has failed to clearly or persuasively explain its contention that Marcus156 discloses these limitations. We have reviewed all the passages in Marcus156 cited by Petitioner and do not find support for Petitioner's contention that the cited art teaches or suggests these limitations. Particularly, we do not find support for the contentions that Marcus156 discloses "generat[ing] a new stream of video programming" or "defining second video programming" by "perform[ing] additional interactive searches."

These contentions are contradicted by Marcus156 in the passages that Petitioner cites. In Marcus156, the user views a video (the "*first video programming*" in Petitioner's mapping) (for example, a "tour of a three-dimensional model of the heart" (Ex. 1009, 14:45–46)) and clicks on the screen to get more information (*id.* at 46–52) ("When the user moves a pointer or mouse to a particular portion of the screen, and clicks on the screen, the system may select, for example, assets incorporating more detailed information on certain portions of the heart corresponding to material on the portion of the screen where the mouse was located when clicked."). Then, the system adds these "assets" to the programming. *See id.* at 14:43–45 ("The system will then generate suitable transitions and add those assets to the programming."), 14:14:52–55 ("The system applies suitable transitions to the assets and incorporates these assets into the programming interactively in response to mouse clicks or other suitable input from the viewer."). Petitioner does not explain, and we do not discern, why it would be necessary or appropriate in the method of Marcus156 to perform additional interactive searches to define video programming that only relates to addition of these "assets" to the first video programming.

And, Petitioner does not direct our attention to any disclosure in Marcus156 of performing additional interactive searches to define second video programming. Instead, Marcus156 discloses “incorporating more detailed information” and “add[ing] those assets” to the existing programming. No “second video programming” is defined or created.

Patent Owner contends that “Petitioner essentially ignores the ‘define a second video programming’ language in its analysis of this limitation, which is sufficient for the Board to find Grounds 1-3 meritless.” Prelim. Resp. 30. More specifically, Patent Owner argues:

The closest Petitioner comes to addressing this limitation is its unexplained claim that Marcus156 discloses “generat[ing] a new stream of video programming.” Pet. at 22 (citing Marcus156 at 14:40-45, 14:46-55, 7:11-15). However, the first two (unexplained) citations confirm that if and when Marcus156’s interactive system performs “additional interactive searches” (in Petitioner’s parlance) no “new stream of video programming” is generated. *Id.* (citing Marcus156 at 14:40-55). Instead, when appropriate assets are identified, they are added to the existing video programming:

At this point, the system may select assets that are appropriate to the particular information that the viewer appears to be seeking based on the information on the screen at the time. The system will then generate suitable transitions and **add those assets to the programming**. For example, the program may be a tour of a three-dimensional model of the heart. When the user moves a pointer or mouse to a particular portion of the screen, and clicks on the screen, the system may select, for example, assets incorporating more detailed information on certain portions of the heart corresponding to material on the portion of the screen where the mouse was located when clicked. The system applies suitable transitions to the assets

and **incorporates these assets into the programming interactively** in response to mouse clicks or other suitable input from the viewer.

Marcus156 at 14:40-55 (emphasis added). This passage explicitly contradicts Petitioner’s claim that Marcus156 discloses generating a “new stream of video programming” based on interactive searches and video selections. Pet. at 25.

*Id.* at 30–31. We agree with Patent Owner that the Petition fails to provide support for its assertion that limitations 1[h] and 1[l] are taught or suggested by Marcus156.

We determine that Petitioner fails to establish a reasonable likelihood of showing that Marcus156 teaches or suggests limitations 1[h] and 1[l].

#### 5. Summary

Petitioner fails to establish the cited art discloses limitations 1[g], 1[h], and 1[l] in view of the disclosures of Marcus156 and Harbick and the inadequate analysis of limitations 1[g], 1[h], and 1[l] in the Petition. We determine that Petitioner fails to establish a reasonable likelihood of showing that the combination of Marcus156 and Harbick teaches or suggests limitations 1[g], 1[h], and 1[l].<sup>14</sup>

#### *E. Analysis of Grounds Relying on Ferman and Harbick*

In asserted grounds 4 and 5, Petitioner challenges all the claims of the ’597 patent as obvious based on combinations of the teachings in cited art that consists of, or includes, Ferman and Harbick. Pet. 4, 41–65. For these grounds, Petitioner alleges that the combination of Ferman and Harbick

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<sup>14</sup> Patent Owner presents additional arguments challenging the Petition that appear to have merit. However, because we determine that Petitioner has failed to establish the unpatentability of the challenged claims based on our analysis of the limitations discussed in this decision, we need not reach these additional arguments.

teaches or suggests limitations of sole independent claim 1 that we determine are not taught or suggested by Ferman and Harbick. Accordingly, we determine that there is not a reasonable likelihood that Petitioner would prevail with respect to any claim of the '597 patent based on either of the grounds relying on Ferman and Harbick.

We start our analysis of these grounds with a description of the disclosure of Ferman and then consider whether Ferman and Harbick teach or suggest certain limitations of claim 1 of the '597 patent.

*1. Ferman (Ex. 1012)*

Ferman is titled “Audiovisual Management System.” Ex. 1009, code (54). According to the description of the invention’s background, prior systems require a “linear” search of items selected for viewing. *Id.* ¶¶ 2–3. For example, a viewer may program a video cassette recorder (VCR) based on a television guide, but “the viewer scans through the entire video tape to select relevant portions of the program for viewing using . . . fast forward and fast reverse.” *Id.* ¶ 2. “Hard disk” systems (e.g., TiVo) record and play television broadcasts in a manner similar to a VCR, but “viewing the recorded programs occurs in a linear manner and may require substantial time.” *Id.* ¶ 3. “[T]he user should be able to access only that portion of all of the available information that the user is interested in, while skipping the remainder of the information.” *Id.* ¶ 90.

In Ferman’s system, “[a] program description scheme 18 related to the video, still image, and/or audio information 10 preferably includes two sets of information[—]namely, program views and program profiles.” *Id.* ¶ 94. “[T]he program views may contain a set of fields that contain data for the identification of key frames, segment definitions between shots, highlight

definitions, video summary definitions, different lengths of highlights, thumbnail set of frames, individual shots or scenes, representative frame of the video, grouping of different events, and a close-up view[,] . . . so that users can filter and search not only at the program level but also within a particular program.” *Id.* “The program profiles define distinctive characteristics of the content of the program, [e.g.,] actors, stars, rating, director, release date, time stamps, keyword identification, trigger profile, still profile, event profile, character profile, object profile, color profile, texture profile, shape profile, motion profile, and categories[,] . . . [so] to facilitate filtering and searching of the audio and video information.” *Id.*

“[A] user description scheme 20 preferably includes the user’s personal preferences, and information regarding the user’s viewing history such as for example browsing history, filtering history, searching history, and device setting history.” *Id.* ¶ 97. “The user’s personal preferences includes information regarding particular programs and categorizations of programs that the user prefers to view.” *Id.* “The user description scheme may also include personal information about the particular user, such as demographic and geographic information, e.g. zip code and age.” *Id.* “The user description scheme is generated by direct user input, and by using a software that watches the user to determine his/her usage pattern and usage history.” *Id.* ¶ 112. “A well-defined and structured description scheme design allows different devices to interoperate with each other.” *Id.* “The proposed user description scheme includes three major sections for describing a user[: (1)] . . . identifies the described user[: (2)] . . . records a number of settings which may be preferred by the user[: and (3)] . . . records

some statistics which may reflect certain usage patterns of the user.”

*Id.* ¶ 196.

“[A] system description scheme 22 preferably manages the individual programs and other data” by “maintaining lists of programs, categories, channels, users, videos, audio, and images.” *Id.* ¶ 98. “The management may include the capabilities of a device for providing the audio, video, and/or images.” *Id.*

“The descriptors of the program description scheme and the user description scheme should overlap, at least partially, so that potential desirability of the program can be determined by comparing descriptors representative of the same information,” e.g., such that “the program and user description scheme may include the same set of categories and actors.” *Id.* ¶ 99. “The program description scheme and the system description scheme should include at least partially overlapping fields,” such that “the system description scheme will be capable of storing the information contained within the program description scheme[ and] the information is properly indexed.” *Id.* ¶ 101.

“[A] search engine uses the information contained in the program description scheme to retrieve programs on the basis of their content.” *Id.* ¶ 117. “The user description scheme can be used in prioritizing the results of the user query during presentation.” *Id.* “The program description scheme can also be used in navigating through the contents of the database or the query results.” *Id.* For example, “[w]hen each ‘individual preference’ is evaluated against the corresponding information from the program descriptions a score is calculated for that individual preference.” *Id.* ¶ 410. “[a] composite score from the aggregation of individual scores . . . is then

compared against other composite scores for other program descriptions to determine a relative ranking.” *Id.*

“[T]he user can view a thumbnail view of different categories of programs stored in the system.” *Id.* ¶ 114. “The user then may choose frame view, shot view, key frame view, or highlight view, depending on their availability and user's preference.” *Id.* “Selecting a particular category, such as news, provides a set of thumbnail views of different programs that are currently available for viewing[;] . . . [t]he thumbnail views are short video segments that provide an indication of the content of the respective actual program that it corresponds with.” *Id.* ¶ 124.

## 2. Limitations 1[d] and 1[j]

Limitations 1[d] and 1[j] of claim 1 recite:

*identifying a plurality of first **transitional clips** in said one or more databases for association with at least some of said responsive first video clips . . . .*

*identifying a plurality of second **transitional clips** in said one or more databases for association with at least some of said responsive second video clips.*

Ex. 1001, 5:5–7, 5:30–32 (emphasis added). The presentation in the Petition as to limitation 1[d] provides:

***Identifying transitional clips in databases:*** Ferman’s system filters and segments a video program “into story units, scenes, and shots.” Ferman at [0252]. The set of segments includes multiple major events in the video clip, including events which transition between other clips, and all clips are listed in databases such as the syntactic structure description scheme. *Id.* at [0094]; [0252] (syntactic structure description scheme segments clips via a “segment tree [which] may be used to define[] a temporal structure of a video program”); [255]

(semantic description scheme segments clips into events, reflected in an event description scheme). Almeroth ¶¶331.

In particular, the set of sub-segments for given preferred program are related to each other as a sequence of events that pertain to the same overall program. *Id.* at [0094] (“grouping of different events”). Based on the user’s viewing preferences, a set of initial preferred programs can be supplemented by sub-segments from those programs that are automatically selected. A POSITA would consider these video segments, which are thematically and structurally related to other surrounding video clips, to be “transitional clips.” Almeroth ¶331.

To the extent PO contends that these clips do not qualify as “transitional clips,” it would have been obvious for a POSITA to modify Ferman’s system to more explicitly select clips for inclusion in the final video programming based on their ability to transition between other events. A POSITA would have been motivated to do so by at least Ferman’s expressed desire to “include content suited to [the user’s] particular viewing preferences.” Ferman at [0089]. Moreover, doing so would provide more compelling and cohesive video programming. A POSITA would have had a reasonable expectation of success in making any necessary changes to Ferman’s system to more explicitly include transitions, including because Ferman already categorizes sub-sections of a video program by their contextual relationship to other sections. *Id.* at [0094]; Almeroth ¶332.

Pet. 47–48 (alterations in original). The presentation in the Petition as to limitation 1[j] provides:

***Identifying second transitional clips in databases for association with responsive second video clips:*** As with the first search, Ferman’s system will identify a set of second transitional clips for association with the second video clips. Further details are in 1[d] above. Almeroth ¶353.

Pet. 54.

We have reviewed each of the cited paragraphs in Ferman referred to by Petitioner in these passages and we can find no disclosure of transitional clips or any comparable or related concept. Moreover, these limitations require “*identifying . . . transitional clips in . . . databases.*” We can find no teaching or suggestion in the cited paragraphs of Ferman (or elsewhere in Ferman) that supports finding that Ferman teaches or suggests identifying transitional clips in databases. There is no support for this contention in the cited paragraphs (and none that we can otherwise discern) in Ferman. Petitioner fails to provide adequate or persuasive reasoning as to how or why Ferman teaches or suggests these limitations.

With regard to Petitioner’s contention that “it would have been obvious for a POSITA to modify Ferman’s system to more explicitly select clips for inclusion in the final video programming based on their ability to transition between other events,” we determine that this contention is not adequately supported by articulated reasoning. *See* Pet. 48. Petitioner asserts that, “[a] POSITA would have been motivated to do so by at least Ferman’s expressed desire to ‘include content suited to [the user’s] particular viewing preferences.’” *Id.* (citing Ex. 1002 ¶ 89). There is no articulated reasoning (and we can discern none) as to how or why including content suited to a user’s preferences would have motivated a skilled artisan to modify Ferman to select transitional clips. Petitioner also asserts, “doing so would provide more compelling and cohesive video programming.” *Id.* There is no articulated reasoning or explanation for this assertion and we find this statement to be too general and unsupported. We determine that Petitioner has not established that a skilled artisan would have been motivated to modify Ferman’s system as proposed in the Petition.

Patent Owner argues that “Petitioner fails to demonstrate that Ferman discloses ‘identifying . . . a plurality of first[/second] transitional clips.’” Prelim. Resp. 39 (alteration in original). We agree with Patent Owner that the Petition fails to provide adequate support for its assertion that limitations 1[d] and 1[j] are taught or suggested by Ferman.

3. *Limitations 1[g], 1[h] and 1[k]*

Limitations 1[g], 1[h] and 1[k] of claim 1 recite:

*receiving an identification of a first video clip of said first video programming at said video server computing device;*

*searching said one or more databases of video clips according to a second request for **second video programming** that is based at least in part on a stored association between the identified first video clip and at least one second video clip. . . .*

*defining **second video programming** comprising a selected plurality of second video clips, including the designated second video clip, and a selected plurality of second transitional clips that are concatenated according to a second temporal sequence.*

Ex. 1001, 5:15–22, 5:33–37 (emphasis added). The presentation in the Petition as to limitation 1[g] provides:

***Receiving identification of video clip at video server:*** In Ferman’s user interface, a user can interact with a user interface on a user computing device to identify a video clip, including an identification of a clip that triggers the generation and subsequent display of a highlight reel or an event reel. Ferman at [0304] (“The frames provide a visual summary. Depending on the browser, they may also provide clickable entry points to the video. The user may click and start playing back the video starting from that frame.”); [0107] (“The user starts interacting with the system with a pointer or voice commands to indicate a

desire to view recorded sporting programs....”); [0152]; [0154]; [0112]; [0114]; [0250]; [0105] (“The selections of the desired program(s) to be retrieved, stored, and/or viewed may be programmed, at least in part, through a graphical user interface.”); [0309]; Fig. 10; Almeroth ¶343.

In the combined system of Ferman and Harbick, the video server would receive this identification from the user computing device. For example, Harbick discloses reporting an identification of played items (which could have been in the first search result set/first video programming) to the server. Harbick at 6:20-22 (“[T]he player device 30 may be configured to recognize and to report metadata of individual songs or television shows played....”); Almeroth ¶344.

Pet. 51–52. The presentation in the Petition as to limitation 1[h] provides:

***Searching databases of video clips according to second request for second video programming:*** As described above, in Ferman’s user interface, a user can interact with a user interface on a user computing device to identify a video clip, including an identification of a clip that triggers the generation and subsequent display of a highlight reel or an event reel. This causes Ferman’s system to perform another search similar to that described above in 1[b], but with additional information, namely the identified first video clip. Ferman at [0114]; [0264]; [0266]; [0315]; Almeroth ¶345.

The user identifications are used to populate the user description scheme and therefore to search for and select additional video clips. Ferman at [0097] (user description scheme “includes the user’s personal preferences, and information regarding the user’s viewing history such as for example browsing history, filtering history, searching history, and device setting history”); Almeroth ¶346.

Additionally, the user’s identification of a clip can also directly trigger the generation of new video, such as another highlight reel or event reel. *Id.* at [0304] (“The frames provide a visual summary. Depending on the browser, they may also provide clickable entry points to the video. The user may click and start playing back the video starting from that frame.”); [0107] (“The user starts interacting with the system with a

pointer or voice commands to indicate a desire to view recorded sporting programs.”); [0112] (“The user description scheme is generated by direct user input, and by using a software that watches the user to determine his/her usage pattern and usage history.”); Almeroth ¶347

***Based on association between first and second clip:*** The search is based on the stored associations between the prior, selected clip and the new, second clip, including because both videos may have the same or similar tags or entries in the program description scheme. Almeroth ¶348.

*Id.* at 52–54. The presentation in the Petition as to limitation 1[k] provides:

***Defining second video programming with second video clips and second transitional clips concatenated according to second temporal sequence:*** The same systems, data, templates, and algorithms that Ferman’s system used to select a plurality of first video clips, determine a temporal sequence for them, and concatenate them are also used in the second search to define second video programming. In response to a user’s identification of a first video clip, Ferman’s system can generate a highlight reel or event reel with a plurality of video clips in a temporal order, using Ferman’s templates. Ferman at [0107] (generation of highlights). The material in 1[b], 1[c], 1[d], and 1[e] applies here too. Almeroth ¶355-56.

*Id.* at 54–55.

The cited and quoted passages in Ferman and Harbick do not support Petitioner’s contentions that these limitations are disclosed in the cited art. The cited paragraph in Harbick does not support the contention that “[i]n the combined system of Ferman and Harbick, the video server would receive this identification from the user computing device.”<sup>15</sup> We have reviewed

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<sup>15</sup> As discussed above (*see* Section II.D.3. *supra*), Petitioner makes the same contention with regard to the combination of Marcus<sup>156</sup> and Harbick and cites the same passage in Harbick in support. As stated above, we do not understand how or why the cited passage in Harbick supports Petitioner’s

each of the cited paragraphs in Ferman referred to by Petitioner in these passages and we can find no disclosure of searching databases of video clips according to second request for second video programming. We can find no teaching or suggestion in the cited paragraphs of Ferman (or elsewhere in Ferman) that supports finding that Ferman teaches or suggests defining second video programming. There is no adequate or persuasive explanation or reasoning in the Petition as to how or why the combination of Ferman and Harbick teaches or suggests these limitations.

The Patent Owner argues:

Ferman's system does not receive identification of a first video clip for which to search for second video clips that define a second video programming, as in the manner required by the Challenged Claims. Instead, its system **receives an indication of a length duration** that specifies playing more or less of **the same program**. See Pet. at 45-46, 50, 51-52, 53 (relying on Ferman's highlight video programming for additional highlights of a program).

Specifically, Ferman's highlight view presents an initial highlight of a program with the ability to present more or less of the program (e.g., 10, 5, 1 minute highlights) via the "Length" window. Ferman at ¶¶ [0107], [0119], Fig. 10. For instance, Ferman teaches that a user watching a one-minute highlight of a program (e.g., Chicago Bulls game) can watch more of that same program by selecting the five-minute

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contention that this limitation is taught or suggested by the cited art. The cited passage in Harbick provides: "the player device 30 may be configured to recognize and to report metadata of individual songs or television shows played." Ex. 1010, 6:20-22. We do not discern how the player device recognizing and reporting that a song or television show was played supports Petitioner's contention that this limitation is taught or suggested by Harbick or the combination of Ferman and Harbick. There is no support provided for the statement that "[i]n the combined system of Ferman and Harbick, the video server would receive this identification from the user computing device."

highlight duration via the “Length” window. *See id.* at ¶ [0107]; § VI.B.1, *supra* (highlighting the “Length” window durations). In clicking the “Length” window, Ferman’s system receives specification on what version length of the program should be shown. Ferman at ¶ [0151] (depicting the pseudocode of “[t]he descriptor <HighlightLength> specifies which version of the highlight should be shown”). As such, Ferman’s system simply allows receives [sic] indication of what highlight duration to play, it does not receive identification of clips of the initial highlights of the program.

The paragraphs Petitioner cites for user interaction “to identify a [first] video clip” do not describe receiving video clips to indicate what other highlights to show. *See Pet.* at 51-52 (citing Ferman at ¶¶ [0304], [0107], [0105]). For instance, Ferman’s paragraph 105 describes providing programs (e.g., basketball games) to a viewer to choose from, this does not specify the highlights of a program to be played. *See Ferman* at ¶ [0105]. Likewise, paragraph 107 does not describe playing other highlights of the program but instead initial highlights by selecting the program from the title set (e.g., Chicago Bulls game) and indicating a length duration. *Id.* at ¶ [0107], Fig. 10. Finally, Paragraph 304 simply describes a viewer’s browsing preference, for example pausing the game on a frame and replaying from that frame. *See id.* at ¶ [0304]; *see also id.* at ¶ [0298]. Accordingly, none of these paragraphs disclose user interaction for which the system would receive identification of clips of the initial highlights of the program, as in the manner required by Element 1[g].

Prelim. Resp. 37–38. We agree with Patent Owner. We determine that the Petitioner has not shown that the cited art discloses limitations 1[g], 1[h] and 1[k].

#### 4. Summary

Petitioner fails to establish the cited art discloses limitations 1[d], 1[g], 1[h], 1[j], and 1[k] in view of the disclosures of Ferman and Harbick and the inadequate analysis of these limitations in the Petition. We

determine that Petitioner fails to establish the combination of Ferman and Harbick teaches or suggests limitations 1[d], 1[g], 1[h], 1[j], and 1[k].

### III. CONCLUSION

We have weighed the evidence presented by Petitioner and considered its arguments. We determine that Petitioner fails to establish a reasonable likelihood that it would prevail with respect to at least 1 of the claims challenged in the Petition. For each challenged claim in each asserted ground of unpatentability, Petitioner fails to establish that the asserted art teaches or suggests multiple recited limitations. Accordingly, we determine that trial should not be instituted on claims 1–20 of the '597 patent.

### IV. ORDER

Upon consideration of the record before us, it is:

ORDERED that the Petition is *denied* as to all challenged claims, and no trial is instituted.

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Patent 9,317,597 B2

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