

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

VL COLLECTIVE IP LLC,
Patent Owner.

IPR2022-01086
Patent 8,605,794 B2

Before KARL D. EASTHOM, JEFFREY S. SMITH, and
PATRICK M. BOUCHER, *Administrative Patent Judges*.

BOUCHER, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

Unified Patents, LLC (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1, 3, 5, 9, 12, 13, 15, 20, and 21 of U.S. Patent No. 8,605,794 B2 (Ex. 1001, “the ’794 patent”). Paper 2 (“Pet.”). VL Collective IP LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

We have authority under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we grant the Petition and institute an *inter partes* review. The Board has not made a final determination regarding the patentability of any claim.

I. BACKGROUND

A. The ’794 Patent

The ’794 patent describes methods and devices that “enable[] content-related first and second data segments to be synchronized.” Ex. 1001, 2:24–27. Figure 1 of the ’794 patent is reproduced below.

FIG 1

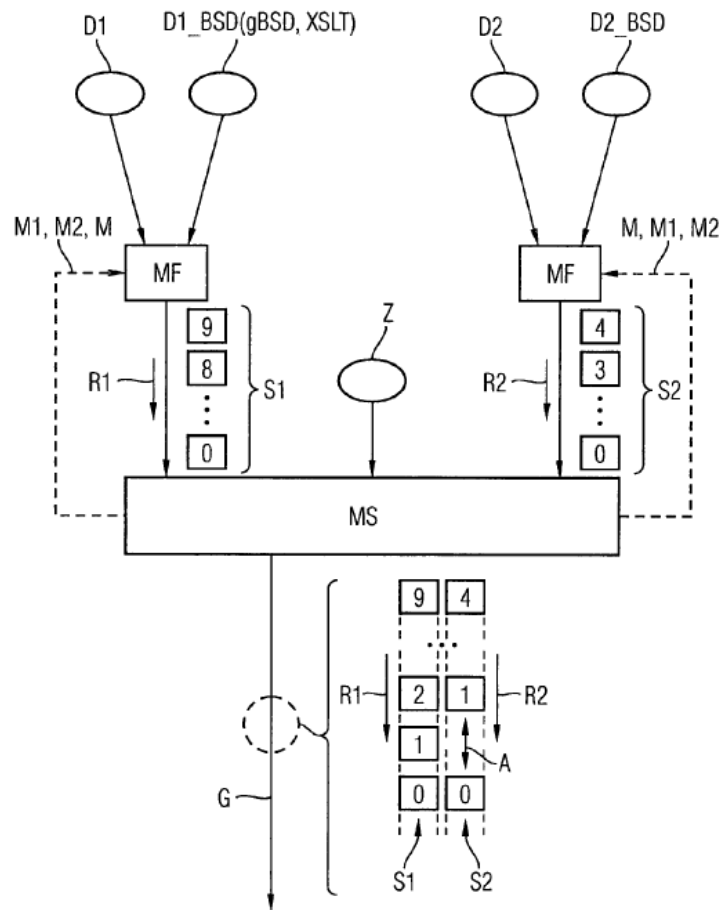


Figure 1 illustrates video and audio data streams meant to be synchronized. *Id.* at 3:65–4:1. In the drawing, D1 represents the video data stream, which is illustrated as segmented into ten data segments S1. *Id.* at 4:3–5. Similarly, D2 represents the audio data stream, which is illustrated as segmented into five data segments S2. *Id.* at 4:6–8.

The video and audio segments are synchronized by synchronization module MS “on the basis of a predefinable assignment rule Z.” *Id.* at 5:10–13. In the illustrated example, where the number of video data segments is twice the number of audio data segments, assignment rule Z outputs each audio data segment with every second video data segment (as indicated in

the lower right portion of the drawing). *Id.* at 5:38–58. The ’794 patent describes other examples of assignment rules that may be applied. *Id.* at 5:59–6:42.

B. Illustrative Claim

Challenged independent claim 1 is representative of the challenged claims, and is reproduced below.

1. A method for synchronizing content-related first data segments of a first data file and content-related second data segments of a second data file, the method comprising:
sequentially outputting, by a device for synchronizing content-related data, the content-related first data segments and the content-related second data segments according to their chronological sequence in such a way that each of the content-related second data segments is output together with an associated one of the content-related first data segments on the basis of an assignment rule for assigning each one of the content-related second data segments to one of the content-related first data segments.

Ex. 1001, 7:45–57.

C. Evidence

Petitioner relies on the following references:

Sonohara	US 5,627,656	May 6, 1997	Ex. 1003
Abbott	US 6,654,933 B1	Nov. 25, 2003	Ex. 1004

In addition, Petitioner relies on a Declaration by Immanuel Freedman, Ph.D. Ex. 1005.

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1–5, 8–11, and 14 on the following grounds. Pet. 3–4.

Claim(s) Challenged	35 U.S.C. §¹	References
1, 3, 5, 9, 12, 13, 15, 20, and 21	102(a), 102(b)	Abbott
1, 3, 5, 9, 12, 13, 15, 20, and 21	103(a)	Abbott
1, 3, 5, 9, 12, 13, 15, 20, and 21	102(a), 102(b)	Sonohara
1, 3, 5, 9, 12, 13, 15, 20, and 21	103(a)	Sonohara

E. Real Parties in Interest

Petitioner identifies only itself as a real party in interest. Pet. 1. In addition to itself, Patent Owner identifies its parent, VL IP Holdings LLC, and VideoLabs, Inc., which is a parent of VL IP Holdings LLC, as real parties in interest. Paper 4, 2.

F. Related Matters

Both parties identify the following related matters as involving the '794 patent: (1) *Starz Entertainment, LLC v. VL Collective IP, LLC*, No. 1:21-cv-01448 (D. Del.); (2) *VideoLabs, Inc. v. Amazon.com, Inc.*, No.

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C § 103(a). The '794 patent resulted from a PCT application filed on March 16, 2006, and that entered the national stage on January 21, 2009. Ex. 1001 at codes (22), (86). We accordingly apply the pre-AIA version of § 103(a) herein.

6:22-cv-00079 (W.D. Tex.); and (3) *VideoLabs, Inc. v. Netflix Inc.*, No. 1:22-cv-00229 (D. Del.). Pet. 1; Paper 4, 2.

II. ANALYSIS

A. Legal Principles

Petitioner makes both anticipation and obviousness challenges. To establish anticipation under 35 U.S.C. § 102, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). While the elements must be arranged in the same way as is recited in the claim, “the reference need not satisfy an *ipsissimis verbis* test.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *In re Bond*, 910 F.2d 831, 832–33 (Fed. Cir. 1990). Identity of terminology between the anticipatory prior art reference and the claim is not required. Prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

A claim is unpatentable for obviousness under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the

prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of nonobviousness, i.e., secondary considerations.² *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

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

B. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The “person of ordinary skill in the art” is a hypothetical construct, from whose vantage point obviousness is assessed. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998). “This legal construct is akin to the ‘reasonable person’ used as a reference in negligence determinations” and “also presumes that all prior art references in the field of the invention are available to this hypothetical

² The parties do not address objective indicia of nonobviousness, which accordingly do not form part of our analysis.

skilled artisan.” *Id.* (citing *In re Carlson*, 983 F.2d 1032, 1038 (Fed. Cir. 1993)).

Petitioner proposes that a person of ordinary skill in the art “would have had a bachelor’s degree in electrical or computer engineering, or a closely related scientific field such as computer science, and two years of work experience with streaming multimedia.” Pet. 6. Petitioner adds that “[a] lack of experience can be remedied with additional education (e.g., a Master’s degree), and likewise, a lack of education can be remedied with additional work experience (e.g., 4-5 years). *Id.* Dr. Freedman supports this articulation, and Patent Owner does not propose any different articulation at this time. Ex. 1005 ¶ 43; Prelim. Resp. 14–15 (Patent Owner asserting that, “[f]or present purposes, this Preliminary Response establishes that Petitioner’s arguments fail even under its preferred definition of the level of ordinary skill.”).

Because we find Petitioner’s proposal reasonable, consistent with the level of skill reflected by the prior art, and supported by the testimony of Dr. Freedman, we adopt it for purposes of this Decision. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art may reflect an appropriate level of skill in the art).

C. Claim Construction

The Board uses “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b)

(2019); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). “Petitioner submits that no claim term requires construction beyond their plain and ordinary meaning.” Pet. 9. Patent Owner proposes certain constructions, but at this juncture, we do not find it necessary to construe any term for purposes of this Decision. Prelim. Resp. 15–26; *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))).

Nevertheless, in an effort to guide the parties, we make the following observations with respect to certain of Patent Owner’s claim-construction positions based on the preliminary record. First, the preambles of independent claims 1 and 9 respectively recite a method and device for “synchronizing content-related first data segments of a first data file and content-related second data segments of a second data file.” Ex. 1001, 7:45–47, 8:26–28. “Patent Owner proposes that the preambles of claims 1 and 9 are limiting, and that in addition to the limitations set forth in the preamble, the referenced ‘first data file’ and ‘second data file’ are distinct from each other (i.e., they cannot be the same data file).” Prelim. Resp. 17.

Although we do not find it necessary for purposes of this Decision to decide whether the claims require distinct data files, we note that claim 5, which depends from independent claim 1, recites that “media data are represented by at least one of the first data file and the second data file.” Ex. 1001, 8:9–11. This recitation appears to add a limitation that the first and second data files are distinct, potentially suggesting that such a

requirement is not part of the underlying independent claim. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (“[T]he presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim.”).

In addition, the specification of the ’794 patent does not appear to provide unambiguous support for Patent Owner’s position. For example, Patent Owner contends that “[i]t also makes little practical sense in the context of the ’794 patent for the first and second data files to be the same file, as the claim would then require synchronizing the file with itself.” *See* Prelim. Resp. 19. But the independent claims do not require synchronization of the first data file with the second data file; rather, those claims require synchronization of the “first *data segments*” and “second *data segments*.” Ex. 1001, 7:48–50 (emphases added). Synchronization module MS, shown in Figure 1 of the ’794 patent, reproduced above, merely operates on the respective data segments after they have been fragmented by respective fragmentation modules MF. *See id.* at 4:42–49 (describing passing of first data segments after fragmentation to synchronization module MF), 5:5–9 (noting similar procedure for second data segments).

At the same time, we recognize that some facts support Patent Owner’s position, such as reference by the bodies of the claims to “the content-related first data segments” and “the content-related second data segments” recited in the preambles, and that the “first data file” and “second data files” are recited separately. *See* Prelim. Resp. 18–19. To the extent necessary to support the parties’ respective positions, the record would benefit from further development of this issue at trial.

Patent Owner also contends that “certain claim scope was disclaimed during prosecution,” but provides no clear explanation of precisely what scope was disclaimed, nor explains how such disclaimer was effected. *See* Prelim. Resp. 15. In addition, Patent Owner relies on “express lexicographic definitions set forth in the specification of the ’794 patent” to inform its proposed construction of certain other terms, but does not appear to rely on such features in distinguishing the asserted prior art. *See id.* at 17. We accordingly discern insufficient reason to construe those terms expressly at this time.

D. Overview of the Prior Art

1. Abbott

Abbott describes “a system and method for implementing interactive media delivery,” particularly “for media stream indexing and synchronization.” Ex. 1004, 1:8–13. Abbott uses an “object hierarchy” that includes “atoms,” “segments,” “series,” and groups,” and which “provides for sequentially ordering data (concatenating in an ordered sequence) for transmission serially in time, and grouping data in a parallel manner for transmission simultaneously.” *Id.* at 5:47–55. For example “a movie can be partitioned into two atoms, one atom for video, and another atom for audio.” *Id.* at 5:59–61. A segment identifies a portion of an atom between two points in time (which may or may not include the beginning or end of the program material). *Id.* at 6:33–42. “A series is a set of one or more segments that are joined or concatenated for sequential delivery of the corresponding data.” *Id.* at 7:8–10. And “[a] group is formed by joining or

grouping series in parallel for parallel, simultaneous delivery of the corresponding data.” *Id.* at 7:16–18.

Abbott describes “a system and method for allowing a viewer to control delivery of the program material to jump or skip (either forward or backward) to selected points in the program material. *Id.* at 12:57–61. Some program material is divided into frames, and Abbott notes that some encoding protocols, such as MPEG-1, group frames into units that Abbott calls “Groups of Pictures” or “GOPs,” so that “[a] GOP is comprised of one or more frames.” *Id.* at 15:65–66, 17:3–6. In such an environment, “an index file is preferably constructed that allows a viewer to skip only to the beginning of a GOP, not simply to the beginning of a frame within the GOP.” *Id.* at 17:6–9.

Figure 9 of Abbott is reproduced below.

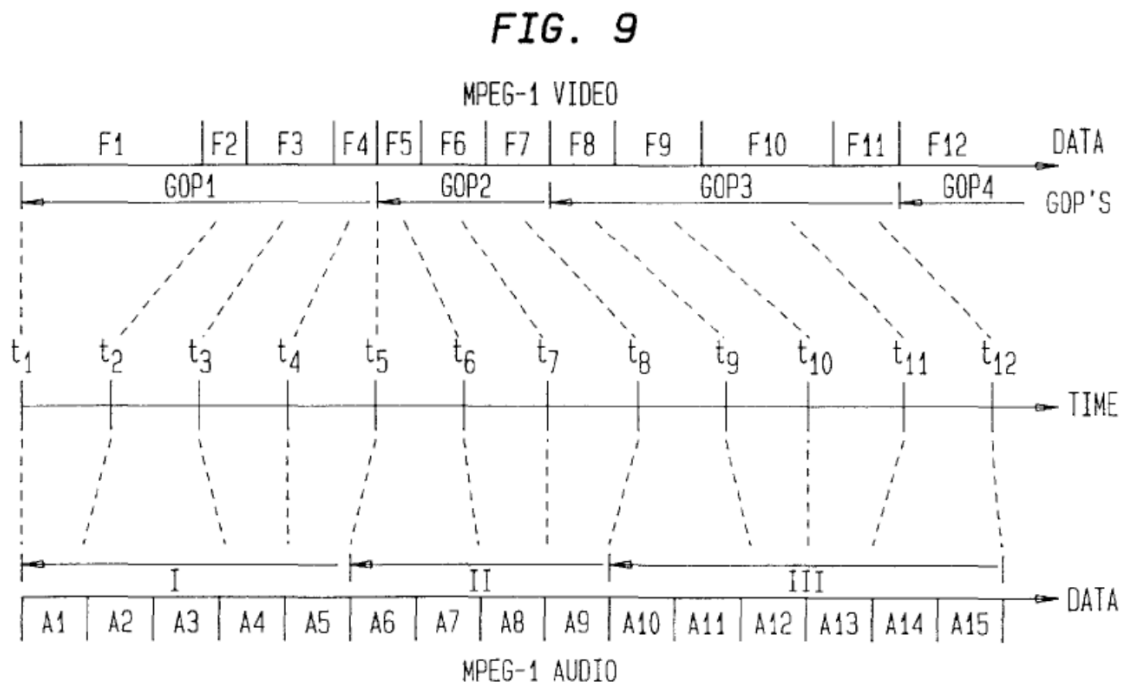


Figure 9 illustrates indexing and synchronization methods described by Abbott. *Id.* at 4:30–34. In this illustration, MPEG-1 video data are divided

into twelve frames, shown as F1, F2, . . . , F12, and these twelve frames are grouped into four GOPs, shown as GOP1, GOP2, GOP3, and GOP4. *Id.* at 17:9–13. That is, frames F1–F4 are in GOP1; frames F5–F7 are in GOP2; frames F8–F11 are in GOP3; and frame F12 is in GOP4. *Id.* at 17:13–16.

The time axis is marked at regular intervals t_1 – t_{12} , generally approximating $1/30$ of a second to correspond to the natural video frame rate of 30 frames/second. *Id.* 17:16–19. “Dashed lines correlate the beginning of each frame with the corresponding time. Frame F1 begins at time t_1 , frame F2 begins at time t_2 , frame F3 begins at time t_3 , etc.” *Id.* at 17:18–20.

Although frames F1–F12 all have the same duration, they have varying sizes, with frame F1 larger than frame F2, for example, because frame F1 contains more data than frame F2. *Id.* at 17:23–26.

MPEG-1 audio has only a single grouping level so that audio frames are not further grouped into GOPs. *Id.* at 17:27–28. Thus, the MPEG-1 audio data shown in Figure 9 is broken down into fifteen audio frames A1–A15, each of which has a fixed frame size so that there is the same amount of data in each audio frame. *Id.* at 17:28–32. Abbott observes that, in this example, “GOP1 spans the time interval from t_1 to t_5 . Audio frames A1, A2, A3, A4, and A5 (set I shown in FIG. 9) come closest to spanning this same time interval.” *Id.* at 19:18–20. Abbott’s synchronization method assigns unique index numbers to each of audio frames A1–A5, but “each of these index numbers points to the same atom-relative byte position that is the beginning of audio frame A1.” *Id.* at 19:21–25. With such synchronization, “the offset or ‘out of sync’ time between audio and video is generally held to be within one frame duration, typically approximately $1/30$ sec,” which is considered “tolerable” because “a decoder that receives program material

from a media provider is typically capable of resynchronizing such an offset.” *Id.* at 19:40–46. Thus, when a user jumps to various points in an item of program material, this indexing method ensures that a jump is made to the beginning of a GOP with tolerable synchronization of video and audio, and playback resumes according to the object hierarchy configurations described above. *See id.* at 18:66–19:4.

2. Sonohara

Sonohara describes “a motion picture reproducing apparatus.” Ex. 1003, 1:11–14. In particular, Sonohara addresses a situation in which frames of digital image data are recorded in an image file and simultaneously collected audio data are recorded in an audio file. *Id.* at 1:19–28. Rendering such content is “intricate,” Sonohara says, “because the audio data and the image data are read out independently from the two files.” *Id.* at 1:36–38. “Namely, it is necessary to adjust timings for synchronism between the video data and audio data,” which increases “a load imposed on a microprocessor.” *Id.* at 1:39–42.

Figure 1 of Sonohara is reproduced below.

FIG. 1

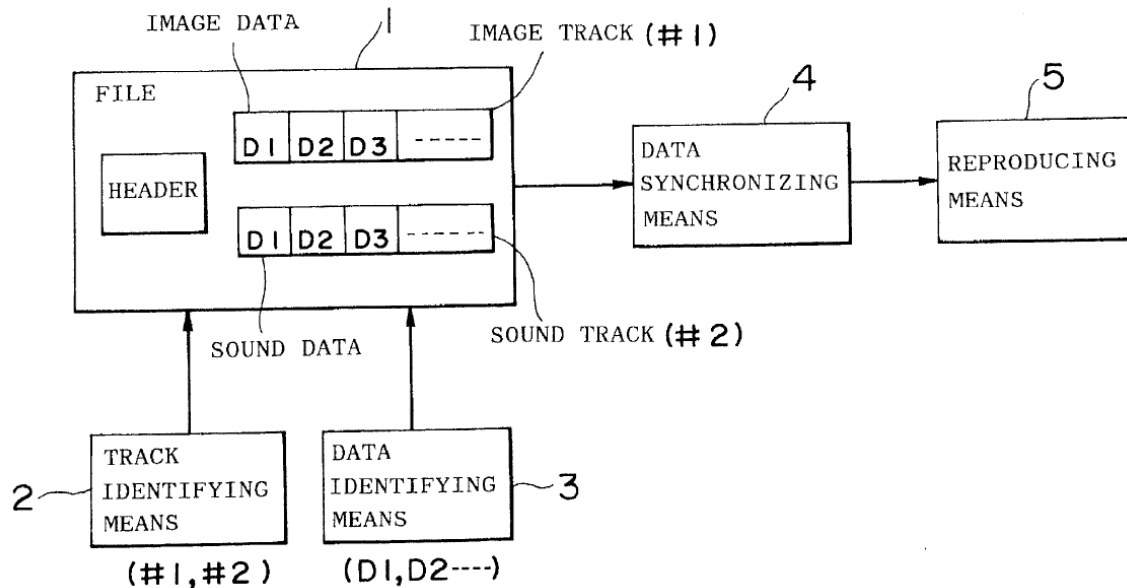


Figure 1 illustrates a “concept” for addressing synchronism of the video and audio data with a “motion picture reproducing apparatus.” *Id.* at 1:44–51. File 1 has an image track that includes (1) “a plurality of frames for a unit time, [] recorded for a predetermined period of time,” (2) a sound track with sound data “recorded for a predetermined period of time corresponding to the image data,” and (3) a header “including control information for controlling the image data and the sound data.” *Id.* at 1:51–58. Track identifying means 2 imparts track identifying numbers “to the image data and the sound data for every unit time.” *Id.* at 1:59–62. Data identifying means 3 imparts data identifying numbers “representative of an order of data within the image track and the sound track” “to the image data and the sound data for every unit time.” *Id.* at 1:62–65. Data synchronizing means 4 reads “in order, the image data and the sound data in the file 1 based on the control

information of the header,” and, at the same time, synchronously outputs the image data and the sound data. *Id.* at 1:66–2:3.

E. Challenges over Abbott

Petitioner challenges claims 1, 3, 5, 9, 12, 13, 15, 20, and 21 as anticipated by, or unpatentable for obviousness over, Abbott. Pet. 10–36.

1. Independent Claim 1

In addressing its anticipation challenge against independent claim 1, Petitioner draws the following correspondences between elements recited in the claim and disclosure by Abbott: (1) the recited “content-related first data segments” and Abbott’s GOPs; (2) the recited “first data file” and Abbott’s video atom file; (3) the recited “content-related second data segments” and Abbott’s audio frames; (4) the recited “second data file” and Abbott’s audio atom file; (5) the recited “device for synchronizing content-related data” and Abbott’s computer system; and (6) the recited “assignment rule” and Abbott’s index files. Pet. 10–13, 14–17, 27–28. For its obviousness challenge, Petitioner contends that Abbott’s “index files at least render obvious the recited *assignment rule*,” and additionally argues that, if not explicitly disclosed by Abbott, it would have been obvious to output Abbott’s video data segments and audio data segments “sequentially” and “together,” as the claim requires. *Id.* at 27–30.

Patent Owner disputes the sufficiency of Petitioner’s showing as failing to show that “Abbott describes outputting ‘each’ of the second data segments together with an associated first data segment based on an ‘assignment rule,’” as the claim requires. Prelim. Resp. 27. According to

Patent Owner, “[a]t most, Abbott discloses creating indexes (the alleged assignment rule that correlate groups of audio frames with video GOPs, using the correlations to synchronize a *single* audio frame with a *single* video GOP when a user jumps to a different point in the media.” *Id.* Patent Owner adds that “processing the subsequent audio frames and video GOPs [is] without any further use of the indexes.” *Id.*

We agree with Patent Owner’s characterization of Abbott’s disclosure. We also agree that “[a] single use of the purported assignment rule, applied to just one audio frame and one video GOP, is plainly insufficient to meet the claim limitation,” which requires that “*each* of the content-related second data segments is *output together* with an associated one of the content-related first data segments *on the basis of an assignment rule.*” *Id.*; Ex. 1001, 7:51–54 (emphases added).

As Patent Owner asserts, “Abbott only uses the index files to correlate an audio frame with a video GOP when the user moves to a different point within the media.” Prelim. Resp. 28 (citing Ex. 1004, 18:66–19:1 (“*When jumping* to various points in an item of program material, the indexing method of the present invention ensures that a jump is made to the beginning of a GOP.” (emphasis added)), 18:53–57 (“The media stream synchronization method of the present invention ensures that the data from every series in a group starts out in synchrony, and remains in synchrony *after any repositioning of the viewpoint within the program material.*” (emphasis added))). Patent Owner adds, and Petitioner appears to agree, that “[f]ollowing this singular use of the indexes, standard playback of content resumes, which does not use assignment rules to correlate first and second content-related data segments.” *Id.* at 29; Pet. 28–29 (Petitioner asserting

that, “[e]ven if the viewer were ‘to skip to an arbitrary point in time in an item of program material,’ [(quoting Ex. 1004, 15:55–57)] after skipping to that time, the content at that point in time would be output and presented *sequentially*, in time order.”). We thus agree with Patent Owner that Abbott discloses using the indexes only when a jump is made in the media, not for “each” content-related second data segment, as the claim requires. *See* Prelim. Resp. 29.

Patent Owner’s point is effectively illustrated with an example discussed by Patent Owner, and which we find instructive. Specifically, Patent Owner considers the example shown in Abbott’s Figure 9, reproduced above, under the scenario suggested by Petitioner’s argument, namely where “the audio and video index files [are] followed sequentially for each audio frame.” *Id.* at 30. In such a case, because Abbott’s synchronization method assigns each of the index numbers for audio frames A1–A5 “to the same atom-relative byte position that is the beginning of audio frame A1,” each of audio frames A1–A5 would be output with the start of video GOP 1. Ex. 1004, 19:21–25; *see* Prelim. Resp. 30. As Patent Owner observes, “the content would not playback smoothly, but instead would be repetitive and asynchronous,” such that “the video data would not be output ‘sequentially’ or ‘chronologically’” as the claim requires. *Id.* at 29–30.

Petitioner’s obviousness theory does not address this deficiency in its anticipation theory. *See* Pet. 27–30 (Petitioner arguing that the recited “assignment rule” is obvious in view of Abbott’s index files, and that it would have been obvious to output Abbott’s video data segments and audio data segments “sequentially” and “together”). That is, Petitioner does not contend that it would have been obvious to output “each” of the second data

segments together with an associated first data segment based on an assignment rule, as the claim requires. Because we determine that Petitioner does not adequately demonstrate that this aspect of the claim is disclosed by Abbott, we necessarily conclude that Petitioner makes an insufficient showing on both its anticipation challenge and its obviousness challenge.

2. Independent Claim 9

Petitioner's analysis of independent claim 9 relies on its analysis of independent claim 1, adapted to account for the fact that claim 9 is directed to a "device" rather than to a "method." Pet. 33–35. For the limitation requiring that "each of the content-related second data segments be[] output together with an associated one of the content-related first data segments based upon an assignment rule," Petitioner specifically relies on its analysis of independent claim 1. *Id.* at 35 ("Abbott discloses limitation [9.2] for the same reasons set forth with respect to limitation [1.2]"). We agree with Petitioner that this limitation is "substantively identical" to the corresponding limitation recited in independent claim 1. *See id.*

Because we determine in the context of independent claim 1 that Petitioner does not sufficiently demonstrate that this limitation is disclosed by, or would have been obvious over, Abbott, we reach the same determination for independent claim 9. That is, we conclude that Petitioner makes an insufficient showing on both its anticipation challenge and its obviousness challenge.

3. Dependent Claims

Each of claims 3, 5, 12, 13, 15, 20, and 21 depends directly or indirectly from one of independent claims 1 or 9. Ex. 1001, 7:64–8:3, 8:9–11, 8:48–52, 8:56–57, 9:1–4. Petitioner’s analysis of these claims does not address or otherwise remedy the deficiency discussed above with respect to the independent claims. *See* Pet. 30–33, 36. We accordingly conclude that Petitioner makes an insufficient showing on both its anticipation challenge and its obviousness challenge for these dependent claims.

4. Summary

We conclude that Petitioner does not demonstrate a reasonable likelihood of prevailing on its challenge of claims 1, 3, 5, 9, 12, 13, 15, 20, and 21 as anticipated by Abbott, nor on its challenge of claims 1, 3, 5, 9, 12, 13, 15, 20, and 21 as unpatentable under 35 U.S.C. § 103(a) over Abbott.

F. Challenges over Sonohara

Petitioner challenges claims 1, 3, 5, 9, 12, 13, 15, 20, and 21 as anticipated by, or unpatentable for obviousness over, Sonohara. Pet. 37–57.

1. Independent Claim 1

Petitioner’s anticipation challenge against independent claim 1 draws the following correspondences between the recited claim elements and Sonohara’s disclosure: (1) the recited “content-related first data segments” and Sonohara’s time-segmented image data; (2) the recited “first data file” and Sonohara’s image file; (3) the recited “content-related second data segments” and Sonohara’s time-segmented sound data; (4) the recited

“second data file” and Sonohara’s sound file; (5) the recited “device for synchronizing content-related data” and Sonohara’s motion picture reproducing apparatus; and (6) the recited “assignment rule” and the control information in Sonohara’s header. Pet. 38, 40–42, 45–45, 48–49. In its alternative obviousness challenge, Petitioner contends that, to the extent not explicitly disclosed by Sonohara, it would have been obvious to output segments according to their chronological sequence and for an assignment rule to have been obvious in light of the control information in Sonohara’s header. *Id.* at 45, 48–49, 51.

We have reviewed Petitioner’s analysis and find it sufficient under the standard we apply at this stage. We note particularly that we agree that Sonohara discloses that it outputs the data segments sequentially “because, for example, the image data portion #1-02 and sound data portions #2-02 are shown as being output together after the output of image data portion #1-01 and sound data portion #2-01.” *See id.* at 42 (citing Ex. 1005 ¶¶ 135; Ex. 1003, Fig. 8). We also agree that Petitioner sufficiently shows that a person of ordinary skill in the art would have recognized that the order would be chronological because Sonohara depicts time-segmented data with sequential cardinal numbers. *See id.* at 43–45 (citing Ex. 1005 ¶¶ 133–135; Ex. 1003, Fig. 7). With respect to the recitation of an “assignment rule,” we further agree that Petitioner adequately shows the limitation is met because Sonohara’s header “includ[es] control information for controlling transfer of said image data and said sound data . . . said control information **indicating a relationship between said image data and said sound data . . .**” *Id.* at 48–49 (quoting Ex. 1003, 5:43–44 (alterations by Petitioner)).

At this time, Patent Owner does not dispute these aspects of Petitioner’s analysis. Rather, Patent Owner contends that Sonohara neither anticipates claim 1 nor would render it obvious because “Sonohara describes techniques for synchronizing image data and sound data that are part of the *same* data file—in fact, the use of a single data file instead of two is central to its alleged contribution to the art.” Prelim. Resp. 34. According to Patent Owner, “[t]he only parts of Sonohara that Petitioner cites as allegedly meeting this claim limitation [i.e., outputting first and second data segments of distinct first and second data files] is the specification’s description of an ‘image file’ and ‘sound file’ and their depiction in Figure 4.” *Id.*

We do not disagree with this characterization of Petitioner’s argument, nor with Patent Owner’s assertion that “Petitioner argues that this limitation is met because the image data and sound data ‘originate from’ separate files.” *See id.* at 35–36. But it is not apparent that this distinction undermines Petitioner’s showing, particularly under Petitioner’s obviousness theory. That is, it appears that Sonohara’s image and sound data stored in the respective tracks of file 1 (shown in Sonohara’s Figure 1, reproduced above) are identical to the image and sound data that originate from Sonohara’s image and sound files. *See* Ex. 1003, 2:17–29 (Sonohara describing “importing” data from image and sound files onto tracks of file 1). We recognize that the parties place a different emphasis on the claim’s language that the respective content-related data segments must be “of a first data file” and “of a second data file.” *See* Pet. 40–42; Prelim. Resp. 35–36. Such differences in the parties’ positions may meaningfully be explored at trial.

Regardless, we determine that Petitioner makes a sufficient showing, at least under its obviousness theory, based on the origination and apparent identity of the respective content-related data segments from distinct files, together with Dr. Freedman’s supporting testimony. *See* Ex. 1005 ¶¶ 130–132. We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of independent claim 1 as unpatentable under 35 U.S.C. § 103(a) over Sonohara.

2. Independent Claim 9

Petitioner presents an analysis of independent claim 9 that adapts its analysis of independent claim 1 to account for claim 9’s recitation of a “device” rather than a “method.” Pet. 55–56. Patent Owner similarly relies on the same reasoning for disputing the sufficiency of Petitioner’s showing under both its anticipation and obviousness theories. Prelim. Resp. 34–37. For the same reasons we discuss for claim 1, we conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of independent claim 9 as unpatentable under 35 U.S.C. § 103(a) over Sonohara.

3. Dependent Claims

We have reviewed Petitioner’s analysis of claims 3, 5, 12, 13, 15, 20, and 21, each of which depends directly or indirectly from one of independent claims 1 or 9. *See* Pet. 51–55. We determine that Petitioner’s analysis, which is not disputed separately by Patent Owner outside of Patent Owner’s arguments directed at the underlying independent claims, is sufficient, at least with respect to Petitioner’s obviousness challenge.

We conclude that Petitioner demonstrates a reasonable likelihood of prevailing on its challenge of claims 3, 5, 12, 13, 15, 20, and 21 as unpatentable under 35 U.S.C. § 103(a) over Sonohara.

III. CONCLUSION

For the foregoing reasons, we conclude that the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail in showing that at least one of the challenged claims is unpatentable. Accordingly, we institute *inter partes* review as to all challenged claims and grounds presented in the Petition. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); 37 C.F.R. § 42.108(a). In light of conclusions with respect to the challenges based on Abbott and Sonohara, we expect that the trial will more productively focus on the Sonohara-based challenges.

IV. ORDER

In consideration of the foregoing, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review is hereby instituted as to claims 1, 3, 5, 9, 12, 13, 15, 20, and 21 of the '794 patent on all grounds set forth in the Petition; and

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

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