

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC
Petitioner,

v.

DIATEK LICENSING, LLC,
Patent Owner.

IPR2022-00638
Patent 7,079,752 B1

Before KEVIN F. TURNER, JEFFREY S. SMITH, and
NABEEL U. KHAN, *Administrative Patent Judges*.

KHAN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

A. *Background and Summary*

Unified Patents LLC filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–4 (“the challenged claims”) of U.S. Patent No. 7,079,752 B1 (“the ’752 patent,” Ex. 1001). The Petition challenges the patentability of claims 1–4 of the ’752 patent. Diatek Licensing, LLC (“Patent Owner”) timely filed a Preliminary Response (Paper 7, “Prelim. Resp.”). Petitioner timely filed a Reply to Patent Owner’s Preliminary Response (Paper 8, “Pet. Reply”). Patent Owner timely filed a Sur-reply to the Petitioner’s Reply (Paper 9, “Sur-reply”).

An *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018). Having considered the arguments and evidence presented by Petitioner and Patent Owner, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing on the challenged claims of the ’752 patent. Accordingly, we institute *inter partes* review as to the challenged claims of the ’752 patent on all the grounds of unpatentability set forth in the Petition.

B. *Related Proceedings*

Petitioner identifies the following pending matters as involving the ’752 patent: *Diatek Licensing LLC v. Home Box Office, Inc.*, Case No. 1:21-cv-06457 (SDNY); *Diatek Licensing LLC v. Coursera, Inc.*, Case No. 1:21-cv-01815 (DDE); *Diatek Licensing LLC v. Hubspot, Inc.*, Case No. 1:21-cv-01816 (DDE); *Diatek Licensing LLC v. Udemy, Inc.*, Case No. 1:21-cv-01817 (DDE); and *Diatek Licensing LLC v. AccuWeather, Inc.*, 1:21-cv-11144 (SDNY). Pet. 1–2.

Petitioner also identifies the following terminated matters as involving the '752 patent: *Diatek Licensing LLC v. Roku, Inc.*, Case No. 6:21-cv-00777 (WDTX); *Diatek Licensing LLC v. CuriosityStream Inc.*, Case No. 1:21-cv-01113 (DDE); *Diatek Licensing LLC v. Redbox Automated Retail, LLC*, Case No. 6:21-cv-00778 (WDTX); *Diatek Licensing LLC v. MLB Advanced Media, LP*, Case No. 1:21-cv-06458 (SDNY); *Diatek Licensing LLC v. AMC Networks, Inc.*, Case No. 1:21-cv-07238 (SDNY); *Diatek Licensing LLC v. NFL Enterprises LLC*, Case No. 1:21-cv-07241 (SDNY); *Diatek Licensing LLC v. Fox Broadcasting Company, LLC*, Case No. 1:21-cv-07247 (SDNY); and *Diatek Licensing LLC v. Vimeo.com, Inc.*, Case No. 1:21-cv-07249 (SDNY). Pet. 2.

C. The '752 Patent (Ex. 1001)

The '752 patent, titled “Process for Recording a Scrambled MPEG Stream,” relates to a process whereby an Moving Pictures Experts Group (“MPEG”) stream’s scrambled data, in parallel to recording of the data, are descrambled to extract additional data from the stream. Ex. 1001, code (54), (57). The additional data extracted correspond to information required by at least one function, e.g., fast forward, fast rewind, accelerated motion, slow motion, etc., of the special or “trick mode.” *Id.* at code (57). Figure 1, reproduced below, illustrates a flowchart defining the steps of the process for recording additional data. *Id.* at 2:37–38.

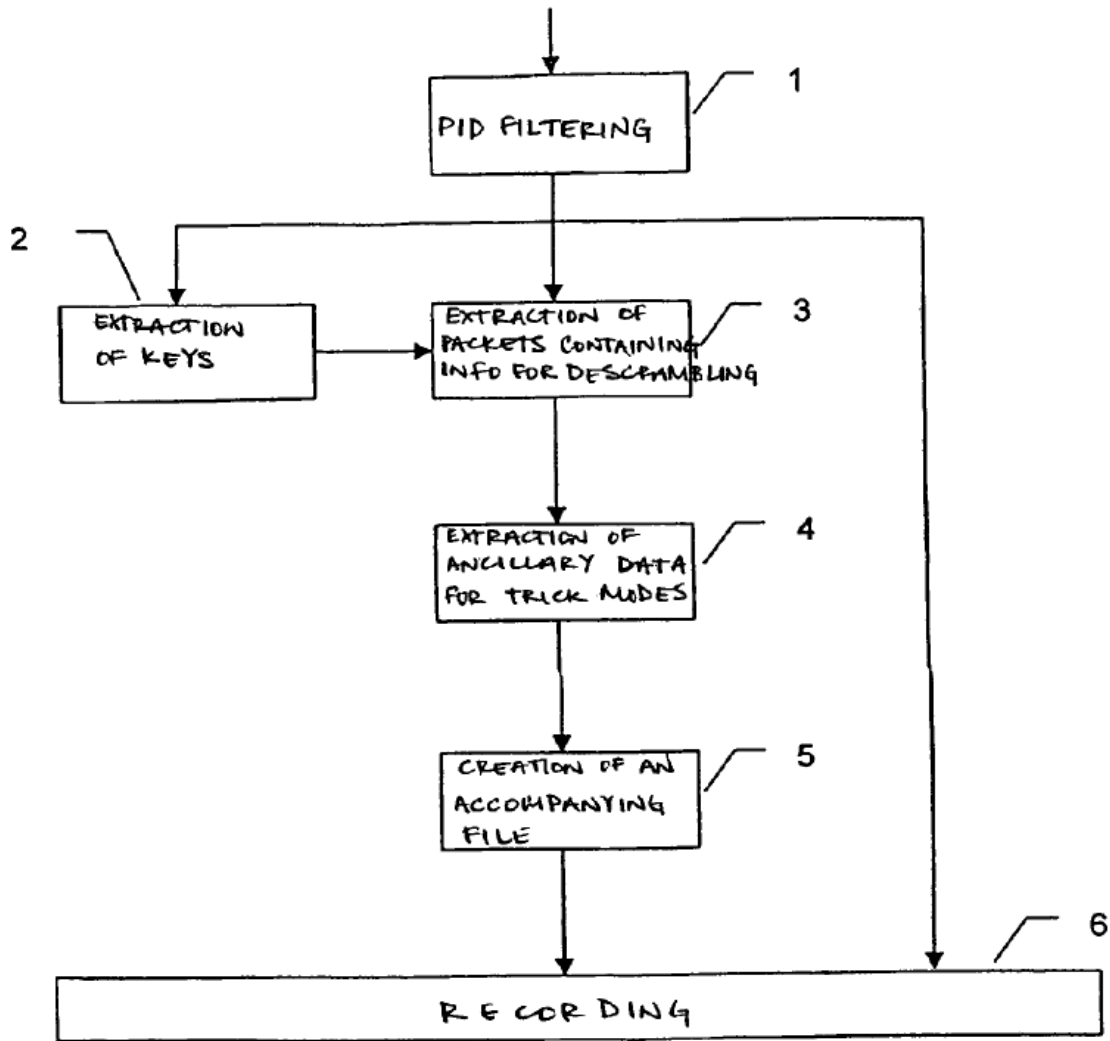


FIG. 1

As shown in Figure 1, first step 1 involves filtering the PID (Packet header Identification) to identify the specific program to be recorded from a scrambled MPEG stream. Ex. 1001, 2:53–56. The partial stream corresponding to the selected program is processed in parallel in step 2, step 3, and step 6. *Id.* at 2:57–59. In step 6, the scrambled partial stream corresponding to the selected program is transmitted directly to a recording medium for recording. *Id.* at 2:60–61.

In step 2, the partial stream corresponding to the selected program is also transmitted to a keys extraction circuit for packet descrambling. *Ex.* 1001, 2:62–67. In step 3, a descrambling circuit extracts from the partial stream, which corresponds to the selected program, the packets containing video information using the descrambling keys extracted from step 2. *Id.* at 3:1–4. In step 4, additional data required for operation of the “trick mode” are extracted from the descrambled video data. *Id.* at 3:14–17. Such additional data may include information such as image sizes, pointers defining starts of images, image types, etc. *Id.* at 3:17–19. In step 5, the extracted additional data are organized to construct a file that accompanies the recorded scrambled data relating to the partial stream corresponding to the selected program. *Id.* at 3:20–22. In step 6, the extracted additional data are recorded on the recording medium in descrambled form along with the scrambled data corresponding to the partial stream originating from step 1. *Id.* at 3:22–24; 3:28–29. Step 6 may also involve construction of a succession of files, including data relating to the “trick mode,” which are recorded in tandem with the recording of the scrambled data. *Id.* at 3:24–27. The ’752 patent is purported to “allow[] the use of the trick mode when reading audio video data recorded in scrambled form.” *Id.* at 2:26–28.

D. Illustrative Claims

Claim 1, the sole independent claim of the ’752 patent, is reproduced below with limitation identifiers in brackets corresponding to claim analysis headings in the Petition. *See, e.g.,* Pet. 19–31.

[1.P] A process for recording, on a recording medium, a scrambled digital video stream, implementing the following steps, in addition to the recording of the scrambled data:

[1.1] descrambling of said scrambled data of said stream so as to extract therefrom additional data corresponding to information

required by at least one function of the special mode or “trick mode” (fast forward, fast rewind, accelerated motion, slow motion, etc.); and

[1.2] recording of these additional data on the recording medium.

Ex. 1001, 6:49–58.

E. Evidence

The Petition relies on the following references:

Reference	Exhibit No.
US 6,233,389 B1; filed July 30, 1998; issued May 15, 2001 (“Barton”).	1004
US 5,805,762; filed Apr. 18, 1994; issued Sept. 8, 1998 (“Boyce”).	1005
US 5,862,299; filed June 19, 1996; issued Jan. 19, 1999 (“Lee”)	1006

Petitioner also relies on the Declaration of Andrew Wolfe, Ph.D. (Ex. 1002) in support of its arguments. The parties rely on other exhibits as discussed below.

F. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–4 are anticipated and/or would have been unpatentable on the following grounds:

Ground	Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1	1–4	102(e)	Barton
2	1–4	103(a)	Barton
3	1–4	103(a)	Barton, Lee
4	1–4	103(a)	Boyce
5	1–4	103(a)	Boyce, Lee

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103 and became

II. ANALYSIS

A. Discretion under 35 U.S.C. § 325(d)

Patent Owner argues “[t]he Board should exercise its discretion to deny institution under 35 U.S.C. § 325(d).” Prelim. Resp. 9. Section 325(d) provides that, in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d) (2018). The Board uses a two-part framework in determining whether to exercise its discretion under § 325(d), specifically:

- (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
- (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential) (addressing in a two-part framework the factors presented in *Becton, Dickonson & Co. v. B Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PRAB Dec. 15, 2017) (precedential as to Section III(C)(5), first paragraph)).

Patent Owner argues that “[s]ubstantially the same art and issues were previously considered by the Office during prosecution of the ’752 patent.” Prelim. Resp. 10. Specifically, Patent Owner draws comparisons between

effective March 16, 2013. Because the ’752 patent was filed before this date, the pre-AIA versions of §§ 102 and 103 apply.

the asserted references, Barton and Boyce, and a reference that the Examiner considered during prosecution of the '752 patent, US Patent No. 5,757,909 ("Park") (Ex. 2001). *Id.* at 10–18. In making this comparison, Patent Owner explains that the Examiner allowed claims 1–4 (if rewritten to overcome certain objections) because:

The closest prior art, Park (US 5,757,909), either singularly or in combination, fail to anticipated or render the limitations "wherein the scrambled data of said stream are, in parallel with their recording, descrambled *so as to extract therefrom additional data corresponding to information required by at least one function of the special mode or "trick mode"* (fast forward, fast rewind, accelerated motion, slow motion, etc.) and wherein these additional data are also recorded on the recording medium" as recited in claim 1.

Id. at 13 (quoting Ex. 1003, 75). Patent Owner also argues that, unlike Park, Barton does not disclose recording a scrambled digital video stream, and thus does not satisfy the following limitations regarding descrambling, while Park does. *Id.* at 16. Therefore, according to Patent Owner, Barton is at best cumulative of Park. *Id.*

Patent Owner also argues that the Examiner described Park as disclosing a process for recording a scrambled digital video stream on a recording medium, as well as for descrambling a recorded scrambled MPEG stream, as part of a copyright protection system used to prevent unauthorized viewing. Prelim. Resp. 16. Patent Owner indicates that the Examiner found that Park disclosed an MPEG audio video digital data stream comprising additional data, such as an adaption header region, allowing the extraction of the information required by at least one function of the trick mode. *Id.* at 16–17. Based on this, Patent Owner argues that Park provided effectively the same system Petitioner proposes creating with the combination of Barton

and Lee. *Id.* at 17. Patent Owner relies on the same arguments to draw comparisons between Boyce and Park, arguing that Petitioner acknowledges that Boyce does not disclose recording of scrambled data but modifies Boyce in light of the knowledge of a person of ordinary skill in the art (“POSITA”) or in light of Lee to prevent unauthorized access. *Id.* at 18.

We start first by noting that it is undisputed that the references asserted in the Petition were not previously before the Office. No evidence has been presented showing that any of the asserted references appear in the prosecution history of the ’752 patent, or that the asserted references have a familial relation to any references applied by the Examiner in a rejection, or that they share some portion of their disclosure with such references. We have found that the same or substantially the same art was not previously presented to the Office in cases with far greater evidence of an overlap between the asserted references and the art that was previously before the Office. *Square, Inc. v. 4361423 Canada Inc.*, IPR2019-01649, Paper 11 (PTAB April 27, 2020) (finding that the same or substantially the same art was not previously before the Office even when one asserted reference was applied by the Examiner in a rejection); *Volkswagen Group of America, Inc. v. Michigan Motor Technologies LLC*, IPR2020-00169, Paper 8 (PTAB June 2, 2020) (finding that the same or substantially the same art was not previously before the Office when one asserted reference applied by the Examiner in a rejection was combined with other art not previously before the Examiner).

Even in light of this, Patent Owner argues that the art and arguments are similar. We determine, however, that Patent Owner does not provide sufficient analysis comparing the disclosures of Barton and Boyce to the disclosure of Park in arguing that the art and arguments are similar and

cumulative. Instead, Patent Owner couches the Examiner’s findings and Petitioner’s contentions in general terms and in the language of the claims. In other words, Patent Owner argues that the art and arguments are similar because the Examiner found Park disclosed the claim limitations and because Petitioner also contends that Barton and Boyce disclose the claim limitations. *See* Prelim. Resp.11 (arguing that the “Examiner characterized Park as ‘disclos[ing] a recording medium . . . containing the data of a scrambled digital video stream as well as additional data relating to the video data of the stream for the operation of the special mode or ‘trick mode’”); *Id.* at 16 (“The Examiner described Park as disclosing a process for recording a scrambled digital video stream on a recording medium, as well as for descrambling a recorded scrambled MPEG stream.”). We find this argument to be unavailing as this will almost always be the case in situations where the Examiner applies art in rejecting the claims. This is insufficient as the primary basis of an argument under the first prong of the *Advanced Bionics* framework without a deeper comparison of the disclosures of the references relied upon by the Examiner and the references relied upon by Petitioner. As evidence of the near universality of this type of argument, Patent Owner relies on the same arguments for Boyce as it does for Barton, even though the two references are different and do not share a common disclosure. *See Id.* at 18 (“For the same reasons discussed regarding the Barton-based grounds, Petitioner’s arguments based on Boyce alone or Boyce in view of Lee are cumulative of the Examiner’s consideration of the Park reference.”).

Here, a review shows several differences in the disclosures of Park, Barton, and Boyce. Park relates to a “digital video system for preventing an illegal user from viewing the digital video system and copying therefore, by

setting a descrambling method which decrypts split key-streams adopting a smart card.” Ex. 2001, 1:9–12. Barton relates to “a multimedia time warping system” that “allows the user to view a television broadcast program with the option of instantly reviewing previous scenes within the program” and “to store selected television broadcast programs while the user is simultaneously watching or reviewing another program.” Ex. 1004, 1:63–2:3. Boyce relates to a “device for transmitting digital packetized video and audio” where a video encoder receives and encodes video signals into a digital video stream including codewords, and generates motion vectors for use by a video tape recorder during track play operation. Ex. 1005, code (57).

Moreover, the Examiner relies on “tape of VCR 9” as the recited “recording medium” in Park (Ex. 1003 at 71), while Petitioner relies on FIFO 706, DRAM 714, and hard disk 105, as the recited “recording medium” in Barton (Pet. 26 (citing Ex. 1004, 3:61–65, 1:60–2:42, Figs. 1, 4–6, 12)). Similarly, the Examiner relies on Park’s disclosure of an adaption header region as teaching the claimed “additional data” (Ex. 1003, 71 (citing Ex. 2001, 3:3–38)) whereas Petitioner relies on Program Time Stamp (PTS) information as teaching the “additional data” in Barton (Pet. 28 (citing Ex. 1004, 5:33–50, 6:26–58, Figs. 4–7; Ex. 1002 ¶¶ 109–115)) and special trick play information, such as trick play motion vectors, trick play intra-coded image data, and trick play codewords as teaching the recited “additional data” in Boyce (Pet. 60 (citing Ex. 1005, 16:3–16; Ex. 1002 ¶¶ 197–202)). These distinctions in the art and arguments have not been sufficiently addressed by Patent Owner.

Based on the record before us, we determine that the evidence does not demonstrate that the same or substantially the same art previously was

presented to the Office or the same or substantially the same arguments previously were presented to the Office. Because of this determination, we need not and do not consider the second prong of the *Advanced Bionics* framework. *See Advanced Bionics*, Paper 6 at 8. Accordingly, we decline to deny institution under § 325(d).

B. Principles of Law

Petitioner bears the burden of persuasion to prove unpatentability of the claims challenged in the Petition, and that burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. Inc., v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987); *see also Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir. 2008) (to anticipate a patent claim under 35 U.S.C. § 102, “a single prior art reference must expressly or inherently disclose each claim limitation”). Moreover, “[b]ecause the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). Whether a reference anticipates is assessed from the perspective of one of ordinary skill in the art. *See Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368–69 (Fed. Cir. 2003) (“[T]he dispositive question regarding anticipation [i]s whether *one skilled in the art* would reasonably understand or infer from the [prior art

reference’s] teaching’ that every claim element was disclosed in that single reference.” (second and third alterations in original) (quoting *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991))).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *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) any objective evidence of obviousness or non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

C. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, 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) (internal quotation marks and citation omitted).

Petitioner’s declarant, Dr. Wolfe, opines that a person of ordinary skill in the art in the field “at the time of the filing of ’752 Patent’s earliest possible priority date would have had at least a Bachelor’s degree in Electrical, Computer, and/or Network Engineering (or related subject matter), and two to three years of relevant industry experience.” Ex. 1002, ¶ 76; *see* Pet. 16.

Patent Owner states that a person of ordinary skill in the art “in November 1999, would have had at least a bachelor’s degree in electrical engineering or computer science, and three to five years of industry experience in the field of computers and communications.” Prelim. Resp. 2–3.

For purposes of this Decision, we adopt Petitioner’s proposed level of ordinary skill, except that we find that the phrase “at least” in Petitioner’s proposed definition creates a vague, open-ended upper bound for the level of ordinary skill, and we therefore do not adopt that aspect of the proposal. Thus, we determine at this stage of the proceeding, that a person of ordinary skill in the art would have been a person with a bachelor’s degree in electrical, computer, or network engineering and two to three years working in the field.

D. Claim Construction

We apply the same claim construction standard used in district court actions under 35 U.S.C. § 282(b), namely that articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). See 37 C.F.R. § 42.100(b) (2020).

In applying that standard, claim terms generally are 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 and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “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). Only claim terms in controversy

require express construction, “and only to the extent necessary to resolve the controversy.” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *see also Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

Petitioner argues that the preamble of claim 1 is directed to a statement of ‘purpose or intended use for the invention’ and should not be considered limiting. Pet. 16. Petitioner argues that the preamble does not supply antecedent basis for any terms in the body of the claim, and the preamble was not relied upon during prosecution to distinguish prior art. Pet. 17–18. In the alternative, if the preamble is found limiting, Petitioner argues it should not be construed to require that the recording be performed in parallel with descrambling or that there is any temporal relationship between the recording of scrambled data and descrambling the data. *Id.* at 18–19.

Patent Owner argues that the plain language of the preamble indicates that it is limiting and that it expressly requires recording of the scrambled data as a limitation, in addition to limitations 1.1 and 1.2. Prelim. Resp. 5–6. Patent Owner also argues that the preamble is limiting because it repeatedly supplies antecedent basis for terms in the body of claim 1. *Id.* at 6–7.

Petitioner and Patent Owner’s arguments raise the following primary issues: (1) whether the preamble of claim 1 is limiting, and if so, (2) whether the preamble requires recording of the scrambled data and (3) whether the recording of scrambled data has any temporal relationship with descrambling of the scrambled data of said stream including whether the recording occurs in parallel with the descrambling.

At this preliminary stage, we determine that the preamble is limiting and that it requires recording of the scrambled data but that the recording of the scrambled data is not required to have any temporal relationship with the subsequent limitations reciting the “descrambling of said scrambled data of said stream” or the “recording of these additional data on the recording medium.”

Here we agree with Patent Owner that the terms “said scrambled data” and “said stream” in limitation 1.1 refer to the term “scrambled data” and “stream” appearing in the preamble and depend on these terms for antecedent basis. Prelim. Resp. 6–7. Similarly, the phrase “the recording medium” appearing in limitation 1.2 refers back to the “recording medium” of the preamble. For these reasons, we determine that the preamble is limiting.

Having determined that the preamble is limiting, we also determine that the preamble requires “recording of the scrambled data.” As Patent Owner explains, the express language of the preamble recites “recording of the scrambled data” as a limitation that is in addition to the steps that follow. Prelim. Resp. 5.

We do not find any evidence, nor does Patent Owner explicitly argue, that the recording of the scrambled data has any temporal relationship to the other limitations of the claim. We therefore do not interpret the claim to include such a requirement at this stage of the proceeding.

A final determination as to claim construction will be made at the close of the proceeding, after any hearing, based on all the evidence of record. The parties are expected to assert all their claim construction arguments and evidence in the Petition, Patent Owner’s Response, Petitioner’s Reply, or otherwise during trial, as permitted by our rules.

E. Anticipation by and/or Obviousness over Barton (Grounds 1 and 2)

Petitioner argues claims 1–4 of the '752 patent are anticipated by or would have been obvious over Barton. Pet. 19–44. Below we provide a brief overview of the prior art reference and then analyze Petitioner's contentions in light of Patent Owner's arguments.

1. Barton (Ex. 1004)

Barton relates to a multimedia time warping system, which allows a user to store selected television broadcast programs while the user is simultaneously watching or reviewing another program. Ex. 1004, code (57). Figure 1, reproduced below, is a block schematic diagram of the multimedia time warping system. *Id.* at 2:44–45.

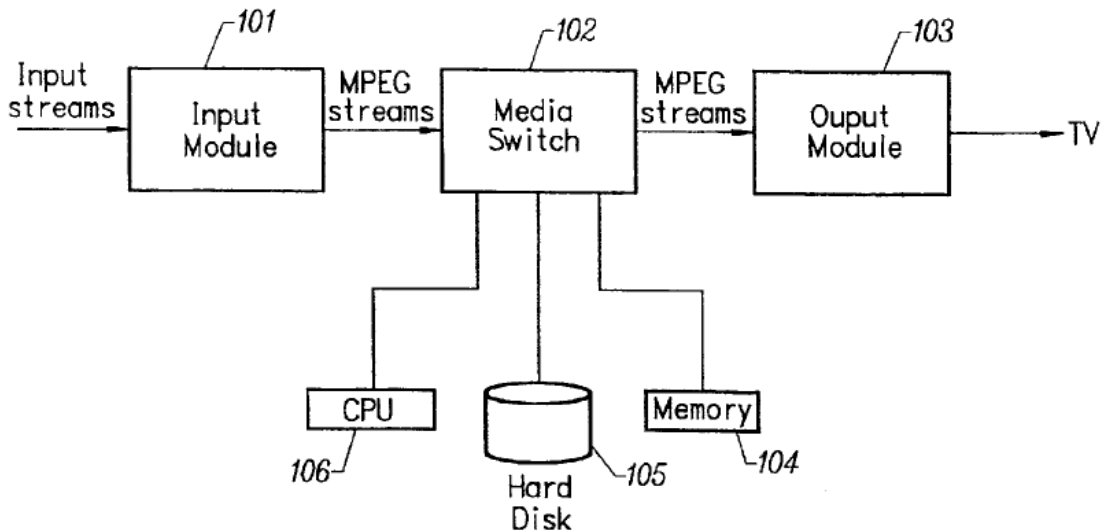


FIG. 1

As shown in Figure 1, the multimedia time warping system may include input section 101 for tuning a channel to a particular program, extracting a specific MPEG program, and feeding MPEG streams to media switch 102. Ex. 1004, 3:47–49. Further, media switch 102 mediates

between microprocessor CPU 106, hard disk or storage device 105, and memory 104. *Id.* at 3:62–64. Still further, media switch 102 buffers the MPEG stream into memory 104 and performs two operations if the user is watching TV in real time by: (i) sending the stream to output section 103 and (ii) writing the stream simultaneously to hard disk or storage device 105. *Id.* at 3:65–4:2.

Figure 6, reproduced below, is a schematic diagram of a packetized elementary stream (PES) buffer constructed from the parsed components in the media switch's output circular buffers. Ex. 1004, 2:44–45.

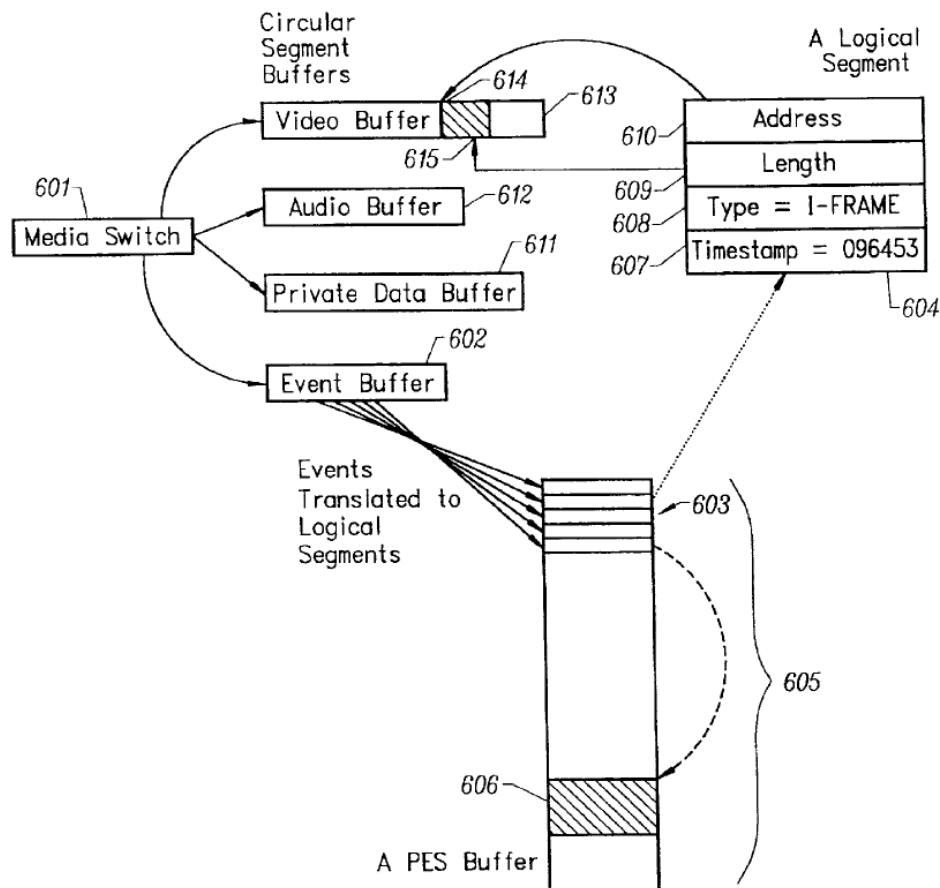


FIG. 6

As shown in Figure 6, the program logic reads accumulated events in event buffer 602 when it is interrupted by media switch 601 and generates a Sequence of logical Segments 603, which correspond to the parsed MPEG segments 615. Ex. 1004, 5:34–38. Further, “[t]he program logic converts the offset 502 into the actual address 610 of each segment, and records the event length 609 using the last cached event.” *Id.* at 5:38–41. Still further, “the program logic uses the generated time Stamp 504 to calculate a simulated” Program Time Stamp (PTS) “for each segment and places that into the logical segment time stamp 607.” *Id.* at 5:43–48. Barton discloses that “[t]he program logic continues collecting logical Segments 603 until it reaches the fixed buffer size” and, “[w]hen this occurs, the program logic generates a new buffer, called . . . (PES) 605 buffer containing these logical Segments 603 in order, plus ancillary control information.” *Id.* at 5:50–56. “Each logical Segment points 604 directly to the circular buffer, e.g., the video buffer 613, filled by the Media Switch 601.” *Id.* at 5:56–58. When a PES “buffer is read back from the Storage medium with a Single transfer from the Storage media, []the logical Segment information is updated to correspond with the actual locations in the buffer 606.” *Id.* at 6:7–11.

Figure 7, reproduced below, depicts a block schematic diagram of the media switch and the various components that it communicates with. *Id.* at 2:63–64.

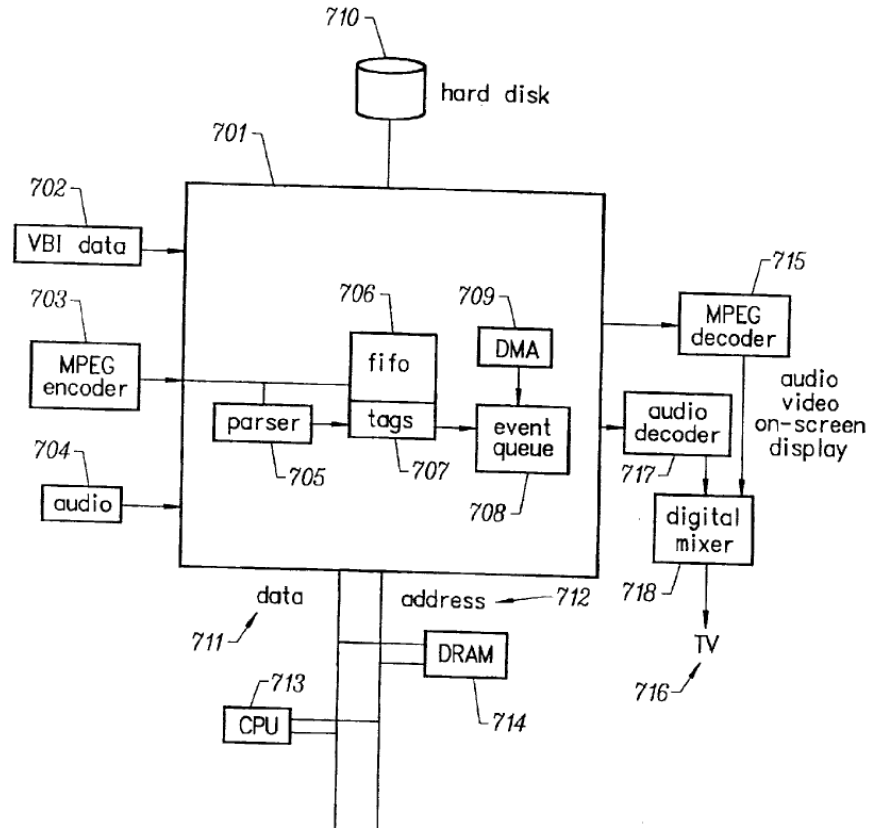


FIG. 7

As shown in Figure 7, Media Switch 701 is connected to an MPEG encoder 703 and circuits specific to MPEG audio 704 and vertical blanking interval (VBI) data 702. Ex. 1004, 6:26–30. Further, parser 705 of Media Switch 701

detects the beginning of all of the important events in a Video or audio stream, the Start of all of the frames, the Start of Sequence headers—all of the pieces of information that the program logic needs to know about in order to both properly play back and perform Special effects on the Stream, e.g. fast forward, reverse, play, pause, fast/slow play, indexing, and fast/slow reverse play.

Id. at 6:39–46. Barton describes that “Media Switch 701 has a data bus 711 that connects to the CPU 713 and DRAM 714” and that “[a]n address bus 712 is also shared between the Media Switch 701, CPU 713, and DRAM 714.” *Id.* at 6:59–63. As shown in Figure 7, “hard disk or storage device

710 is connected to one of the ports of the Media Switch 701,” which “outputs streams to an MPEG video decoder 715 and a separate audio decoder 717.” *Id.* at 6:63–65. The decoded audio output from MPEG decoder 715 is digitally mixed 718 with the separate audio signal and sent to TV 716. *Id.* at 7:1–4.

2. *Analysis of Claim 1*

Petitioner contends that Barton expressly teaches or renders obvious the preamble and limitations 1.1–1.2. Pet. 25–32. Petitioner supports its arguments with citations to Barton and to the testimony of Dr. Wolfe. Other than in one instance, discussed below, Patent Owner does not separately dispute Petitioner’s contentions regarding these limitations. Rather, Patent Owner relies on its arguments under § 325(d) which we addressed above. Prelim. Resp. 10. At this stage of the proceeding, we have some concerns regarding whether Petitioner has sufficiently shown that Barton discloses or renders obvious the limitations of claim 1.

a) *Preamble – “A process for recording, on a recording medium, a scrambled digital video stream, implementing the following steps, in addition to the recording of the scrambled data”*

With respect to the preamble, Petitioner argues that Barton teaches “recording, on a recording medium, a scrambled digital video stream,” by disclosing that Barton’s parser records an encrypted MPEG video stream on FIFO 706 and/or DRAM 714 and also on hard disk 105. Pet. 25–28 (citing Ex. 1004, 1:60–2:42, 3:30–65, 12:3–14, Figs. 1, 7; Ex. 1002, ¶¶ 32–40, 101–07).

Petitioner also argues, in the alternative, that recording the scrambled video stream in its scrambled state would have been obvious in view of the knowledge of a POSITA and accomplished with a reasonable expectation of

success. Pet. 27. This is because, according to Petitioner, a POSITA would have known that the use of scrambling was well-known and widely practiced at the time of the '752 patent. *Id.* (citing Ex. 1002 ¶¶ 32–40, 106–107).

Petitioner cites to the '752 patent which it argues admits that scrambling was widely used in the art (*id.* at 27 (citing Ex. 1001, 1:10–21)) and to the MPEG2 standard which Petitioner argues expressly includes data fields within the MPEG stream to provide conditional access and scrambling control data (*id.* at 27, 39 (citing Ex. 1008, xi, 3–4, 8, 18–19, 29–33, 39–40, 65–66, 87–91, 103–05)). Petitioner argues that the benefits of scrambling include “preventing copyright infringement and/or unauthorized access (*e.g.*, by non-subscribers) of content such as premium channels or pay-per-view programming” and that these benefits would be applicable for both transmission and for storage. *Id.* at 27–28 (citing Ex. 1007, Fig. 7, 20, 3:8–19, 3:65–4:8). Petitioner’s arguments that there would have been sufficient motivation to modify Barton are supported by unrebutted testimony from Dr. Wolfe. Ex. 1002 ¶¶ 32–40, 105–107.

Patent Owner argues that Barton does not expressly disclose recording of the scrambled video stream in its scrambled state because the passage relied upon by Petitioner from Barton “explicitly states that it relates to ‘various data items [that may be introduced] to the program logic *which are not properly conceived of as television signals.*’” Prelim. Resp. 14 (quoting Ex. 1004, Barton at 12:5–6 (emphasis added)). Thus, according to Patent Owner, “Barton does not disclose recording a scrambled digital *video* data stream, as required by claim 1.” *Id.* Patent Owner does not separately dispute Petitioner’s alternative contentions that Barton renders obvious the preamble when modified by the knowledge of one of ordinary skill in the art.

At this preliminary stage we determine Petitioner has shown a reasonable likelihood that Barton renders obvious the preamble under Ground 2 for the reasons summarized above. Petitioner supports its contentions here with credible testimony from Dr. Wolfe explaining that it would have been obvious to modify Barton in light of the knowledge of a POSITA. Ex. 1002 ¶¶ 32–40, 105–107. We have some concerns regarding Petitioner’s anticipation challenge under Ground 1 and whether Petitioner has sufficiently shown that Barton expressly teaches recording of the scrambled data. As Patent Owner argues, the passage relied upon by Petitioner to show that Barton teaches recording of scrambled data refers to signals other than “television signals,” such as “non-TV control signals.” Ex. 1004, 12:3–6. At trial, if Petitioner so chooses, the record would benefit from further development of these issues.

b) *Limitation 1.1 – “descrambling of said scrambled data of said stream so as to extract therefrom additional data corresponding to information required by at least one function of the special mode or “trick mode” (fast forward, fast rewind, accelerated motion, slow motion, etc.)*

For limitation 1.1, Petitioner argues that Barton expressly discloses descrambling or decrypting an encrypted MPEG stream, relying on the same passage as above, which we determine does not refer to the television signals, but instead refers to non-TV control information. Pet. 28 (citing Ex. 1004, 12:3–14; Ex. 1002 ¶¶ 109–115). Petitioner contends that Barton extracts Program Time Stamp (PTS) information from the encrypted MPEG stream, and argues that this corresponds to the claimed “descrambling . . . to extract therefrom additional data corresponding to information required by at least one function of the special mode or ‘trick mode’ (fast forward, fast rewind, accelerated motion, slow motion, etc.).” Pet. 28–31 (citing Ex. 1004, 4:33–44, 5:33–50, 6:26–58, 12:3–14, Figs. 4–7; Ex. 1002, ¶¶ 109–15).

Petitioner argues that the PTS information extracted from the MPEG stream teaches the recited “additional data” corresponding to a function of the special mode or trick mode because the PTS information enables Barton to perform special effects on the stream such as fast forward, reverse, play, pause, fast/slow play, indexing, and fast/slow reverse play. *Id.* at 29 (citing Ex. 1004, 6:37–46, Figs. 5–7; Ex. 1002 ¶¶ 109–115).

For the same reasons explained above with respect to the preamble, we are unpersuaded that the passage relied upon by Petitioner teaches “descrambling of said scrambled data” because it refers to non-TV control information rather than to the television signals themselves. Ex. 1004, 12:3–14. As before, if Petitioner so chooses, the record would benefit from further development of these issues at trial.

Unlike the preamble, however, Petitioner does not expressly contend, in the alternative, that limitation 1.1. would have been obvious over Barton modified in light of the knowledge of a POSITA. Instead, Petitioner only includes a general introductory statement that “Barton discloses this limitation [1.1] or at least renders it obvious” without explaining how Barton would render the limitation obvious. Petitioner’s expert, Dr. Wolfe, also does not provide testimony explaining how Barton would render this limitation obvious in light of the knowledge of a POSITA. For these reasons we have concerns regarding the sufficiency of Petitioner’s contentions that Barton either expressly discloses limitation 1.1 or renders it obvious.

c) *Limitation 1.2 – “recording of these additional data on the recording medium”*

For limitation 1.2, Petitioner identifies Barton’s extracted, buffered, and stored PTS information on FIFO 716, or DRAM 714, or hard disk 710 as the claimed “recording of . . . additional data on the recording media.”

Pet. 31–32 (citing Ex. 1005, 5:20–49, 6:47–7:4, 7:48–8:8, Figs. 6–8; Ex. 1002, ¶¶ 117–19).

We determine Petitioner has sufficiently shown that Barton teaches recording of its PTS information on Barton’s DRAM or hard disk and thus teaches recording additional data on the recording medium.

3. *Analysis of Claims 2–4*

Claims 2–4 depend directly from independent claim 1. Based on their dependency we are unpersuaded that Petitioner has made a sufficient showing of a reasonable likelihood that claims 2–4 are anticipated by or would have been obvious over Barton.

4. *Conclusion – Anticipation by and/or Obviousness over Barton (Grounds 1 and 2)*

Accordingly, having considered the arguments and evidence, we are not persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on its challenge to claims 1–4 of the ’752 patent as anticipated by or obvious over Barton.

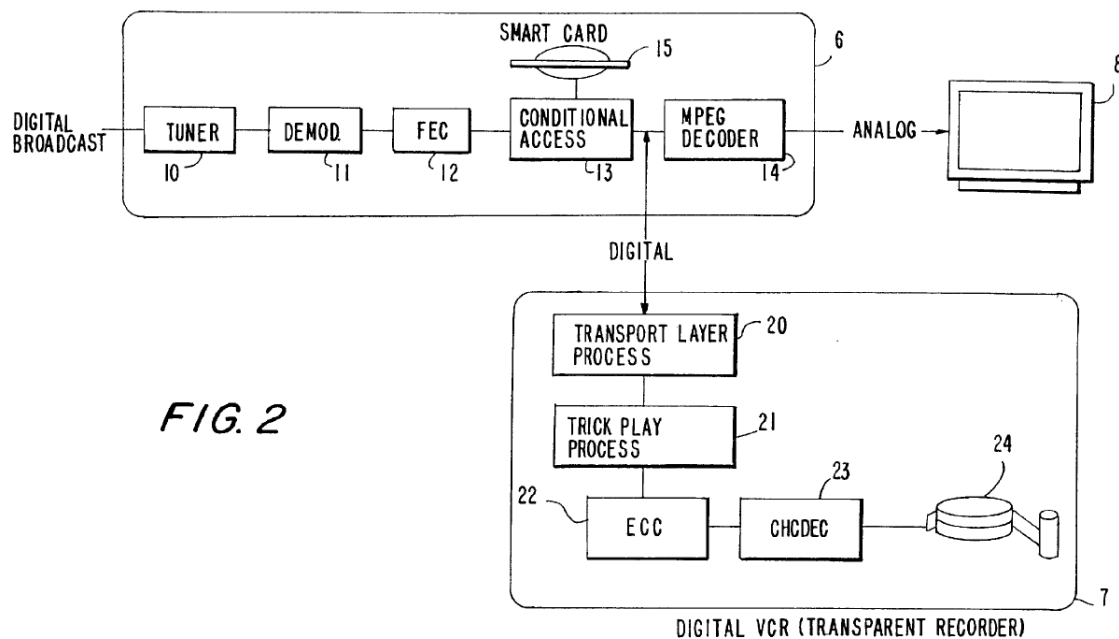
F. *Obviousness over Barton and Lee (Ground 3)*

Petitioner argues claims 1–4 of the ’752 patent would have been obvious over Barton and Lee. Pet. 44–56. Petitioner relies on Barton in much the same way as it did for Grounds 1 and 2, except that Petitioner relies on Lee to teach that it would have been obvious to record a scrambled digital video stream in its scrambled state. *See Id.* at 48–50, 51–56. Below we provide a brief overview of the prior art reference Lee and then analyze Petitioner’s contentions in light of Patent Owner’s arguments.

1. *Lee (Ex. 1006)*

Lee relates to a technique for selectively inhibiting a video recorder from recording and/or reproducing television programs, which are not

authorized for viewing. Ex. 1006, (57). Figure 2, reproduced below, is a block diagram showing Lee's technique incorporated in a TV receiver. *Id.* at 3:20–21.



As shown in Figure 2, television receiving apparatus 6 contains a tuner 6 for selectively tuning to a desired broadcasting channel for viewing on display 8 by a subscriber to a digital cable TV service. Ex. 1006, 4:45–51. Lee explains that

[a] signal of the Selected channel is demodulated by a demodulator 11. If the demodulated signal contains an error attributed to the communication path, the error is corrected by a forward error correcting circuit 12. The resultant Signal is supplied to a conditional access circuit 13 to determine if that Signal constitutes a program that is authorized for recording by the television receiving apparatus 6. The conditional access circuit 13 reads from a memory (not shown) the authorization data associated with the program to determine if the television receiving apparatus is authorized to record that program. If there is no authorization data in the memory associated with that program, the conditional access circuit 13 disables the operation of the digital VCR 7 and/or causes an indication, such as the

energization of an LED (not shown), to be displayed to the subscriber, indicating that the television receiving apparatus is not authorized to record the received program.

Id. at 5:38–55. Further, “digital VCR 7 comprises a transport layer processing circuit 20, a trick play processing circuit 21, an error correction code encoder/decoder 22, a channel encoder/decoder 23, and a tape head mechanism (or recording portion) 24.” *Id.* at 5:67–6:3.

Figure 4, reproduced below, is a block diagram representing the manner in which a television program is encoded by the head-end controller and decoded by the television receivers in a cable distribution or direct satellite broadcast system. Ex. 1006, 3:26–30.

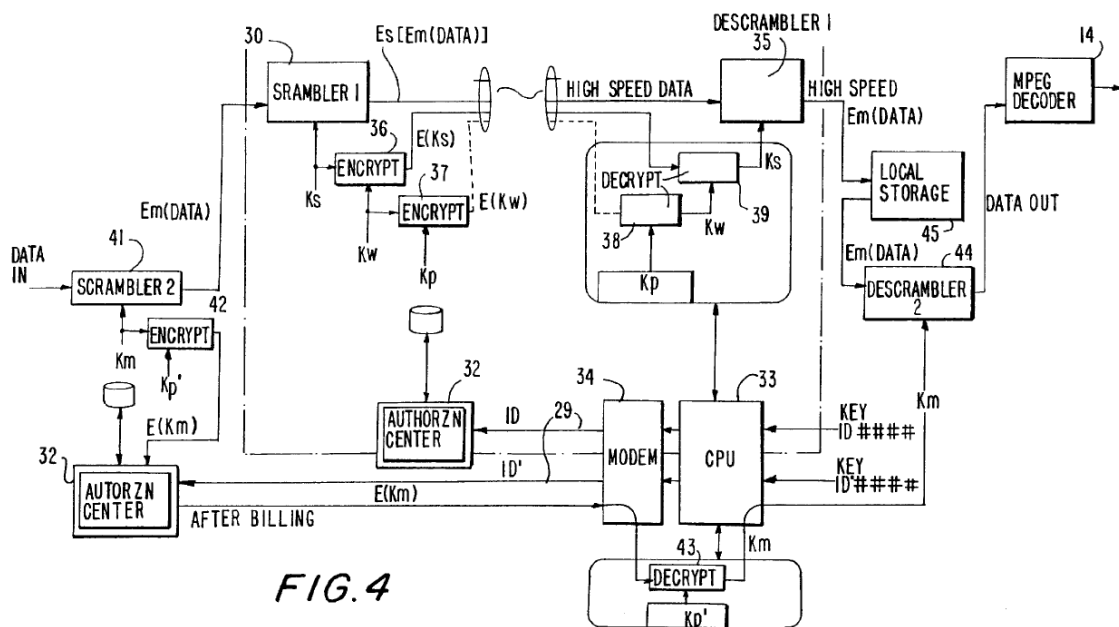


FIG. 4

Figure 4, in pertinent part, shows the use of Descrambler 1 35 to determine if the user is authorized to access the channel containing a scrambled digital television program. Ex. 1006, 9:47–67. Lee explains that Descrambler 1 35 allows the user’s device to access the channel containing the program, but does not descramble the recorded scrambled digital television program itself. *Id.* at 10:34–50. Lee explains that each individual

program having a separate scrambled digital television signal is “scrambled with a respectively different modification key Km.” *Id.* at 10:44–45. When the program is stored on Local Storage 45, it retains this scrambling with key Km. *Id.* at 11:40–67. The descrambling key(s) Km for the individual scrambled digital television programs are stored in “memory or the authorization information area of the local store 45.” *Id.* at 11:53–54. When the user begins playback of the recorded scrambled digital television program, the authentication key Km is provided to Descrambler 2 44, which “descrambles the selected program with the decrypted modification key Km using conventional descrambling techniques” for display to the viewer. *Id.* at 11:62–64.

2. *Analysis of Claim 1*

Petitioner provides detailed analysis demonstrating that Barton and Lee teach or suggest the preamble and limitations 1.1–1.2. Pet. 48–50. Petitioner supports its arguments with citations to Barton, Lee, and to the testimony of Dr. Wolfe. Patent Owner does not separately dispute Petitioner’s contentions regarding the obviousness of any of these limitations. Rather, Patent Owner relies on its arguments under § 325(d) which we addressed above. Prelim. Resp. 16. At this stage of the proceeding, we have some concerns regarding whether Petitioner has sufficiently shown that the combination of Barton and Lee discloses or renders obvious the limitations of claim 1.

a) *Preamble – “A process for recording, on a recording medium, a scrambled digital video stream, implementing the following steps, in addition to the recording of the scrambled data”*

Petitioner argues, as it did in Grounds 1 and 2, that Barton teaches or renders obvious the preamble, but argues in the alternative that if Barton

does not expressly teach “recording of the scrambled data,” that Lee does. Pet. 48–50. Specifically, Petitioner argues that “Lee stores the scrambled television program []in its scrambled form in Local Storage 45,” which Petition corresponds to the preamble’s “recording, on a recording medium, a scrambled digital video stream.” Pet. 49 (citing Ex. 1006, 11:52–67, Figs. 4; Ex. 1002, ¶¶ 162–64). Petitioner argues that it would have been obvious to modify Barton to record the scrambled digital video stream in its scrambled form to prevent unauthorized access to descrambled content on the recording medium, as disclosed by Lee. Pet. 50, 51–56 (citing Ex. 1006, 11:52–67; Ex. 1002 ¶¶ 173–182).

We determine the combination of Barton and Lee teaches the preamble for the reasons stated by Petitioner. Petitioner supports its argument that one of ordinary skill would have combined Barton and Lee with credible testimony from Dr. Wolfe that is unrebutted at this stage of the proceeding. Ex. 1002 ¶¶ 173–182.

b) *Limitation 1.1 – “descrambling of said scrambled data of said stream so as to extract therefrom additional data corresponding to information required by at least one function of the special mode or “trick mode” (fast forward, fast rewind, accelerated motion, slow motion, etc.)*

For limitations 1.1, Petitioner relies on the same arguments as it did for Grounds 1 and 2, which we summarized above and for which we had some concerns regarding sufficiency of showing that Barton discloses or renders obvious the limitation at issue. *See* Pet. 50. Additionally, Petitioner cites to a passage from Lee as teaching this limitation but does not contend or explain how this passage teaches descrambling of said scrambled data. *See id.* (citing Ex. 1006, 6:36–7:3).

c) *Limitation 1.2 – “recording of these additional data on the recording medium”*

Petitioner relies on the same arguments as it did for Grounds 1 and 2 and additionally argues that Lee also discloses recording special trick play data. Pet. 50 (citing Ex. 1006, 6:36–7:3; Ex. 1002 ¶ 168). For the same reasons as explained above with respect to Grounds 1 and 2, we are persuaded that Barton and Lee teach limitation 1.2.

3. *Analysis of 2–4*

Claims 2–4 depend directly from independent claim 1. Based on their dependency we are unpersuaded that Petitioner has made a sufficient showing of a reasonable likelihood that claims 2–4 would have been obvious over Barton and Lee. *See generally* Prelim. Resp.

4. *Conclusion – Obviousness over Barton and Lee (Ground 3)*

Accordingly, having considered the arguments and evidence, we are not persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on its challenge to claims 1–4 of the ’752 patent as obvious over Barton and Lee.

G. *Obviousness over Boyce (Ground 4)*

Petitioner argues claims 1–4 of the ’752 patent would have been obvious over Boyce. Pet. 56–70. Below we provide a brief overview of the prior art reference Boyce and then analyze Petitioner’s contentions in light of Patent Owner’s arguments.

1. *Boyce (Ex. 1005)*

Boyce relates to a device for transmitting digital packetized video and audio data. Ex. 1005, (57). Figure 10(a), reproduced below, is a block diagram of a VTR recording circuit. *Id.* at 10:39.

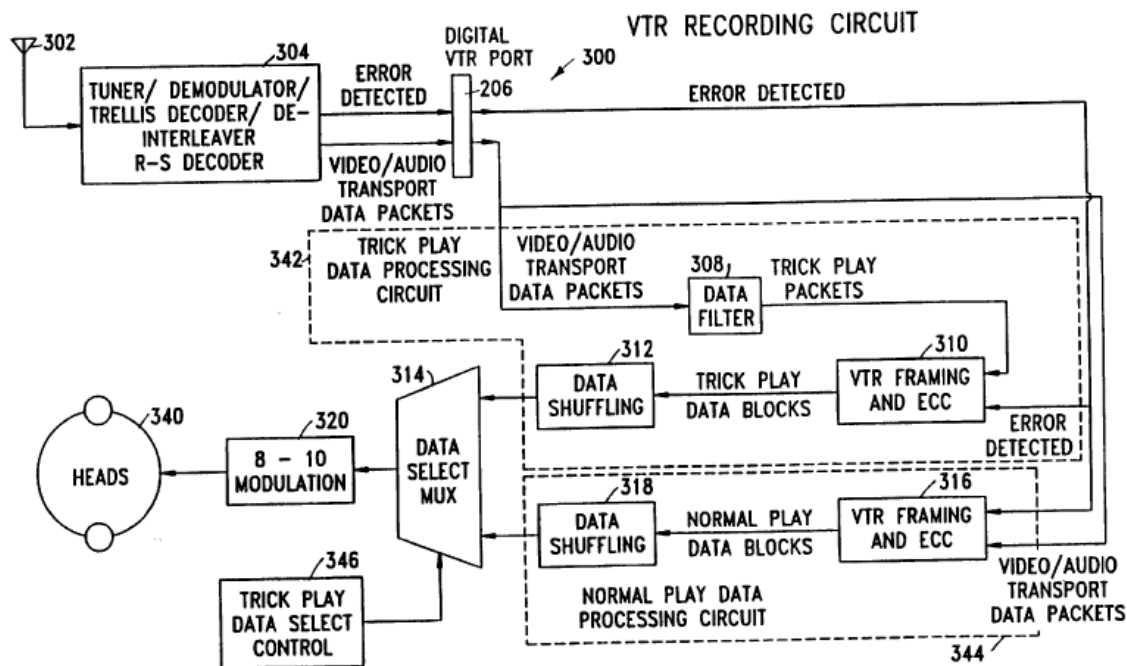


FIG. 10(a)

Figure 10(a), in pertinent part, shows that

trick play data processing circuit 342 selects and processes data from the video/audio transport data packet stream for recording in fast scan track segments while the normal play data processing circuit 344 receives and processes data in the video/audio data packet stream for recording in track segments which are read from during normal playback operation.

Id. at 47:50–57. Boyce explains that the received video program contains “special trick play data” which include, “trick play motion vectors and/or trick play intra-coded image data comprising special trick play codewords intended for use during trick play VTR operation.” *Id.* at 16:5–8. Further, Boyce explains that “transmitting the special trick play data in addition to the normal play data” enables Boyce’s VTR to “use this data during trick play operation” to “achieve superior picture quality than would be possible from a comparable amount of normal play data selected for use during trick play operation.” *Id.* at 16:9–14. After receiving and processing the digital

television signal, the VTR Recording Circuit 300 provides the digital video stream to recording heads 340, which causes the audio/video content to be stored on a videotape. *Id.* at 36:53–37:6.

2. *Analysis of Claim 1*

Petitioner contends that Boyce renders obvious the preamble and limitations 1.1–1.2. Pet. 58–63. Petitioner supports its arguments with citations to Boyce and to the testimony of Dr. Wolfe. Patent Owner does not separately dispute Petitioner’s contentions regarding the obviousness of any of these limitations. Rather, Patent Owner relies on its arguments under § 325(d) which we addressed above. Prelim. Resp. 18. At this stage of the proceeding, we are persuaded that Petitioner has demonstrated a reasonable likelihood that Boyce teaches or suggests the preamble and limitations 1.1–1.2 for the reasons provided by Petitioner.

a) *Preamble – “A process for recording, on a recording medium, a scrambled digital video stream, implementing the following steps, in addition to the recording of the scrambled data”*

For the preamble Petitioner argues that Boyce discloses VTR Recording Circuit 300, receives, decodes, and records an MPEG2 digital video stream onto a videotape. Pet. 58–59 (citing Ex. 1005, 5:47–57, 6:8–32, 9:44–10:34, 16:3–14, 36:53–37:6, 37:54–38:5, Fig. 10(a); Ex. 1002, ¶¶ 193–96). Unlike Barton, however, Petitioner acknowledges that Boyce does not expressly disclose a scrambled digital video stream. *See Id.* at 66–67, 72. Instead, Petitioner argues that it would have been obvious to a POSITA to modify Boyce’s digital VTR to receive and record a scrambled digital video stream in its scrambled form because Boyce supports the MPEG2 video standard which specifically provides conditional access and scrambling control data, and because storing scrambled digital video stream

in its scrambled form would have been obvious to try to prevent unauthorized access. *Id.* at 59, 66–70 (citing Ex. 1002 ¶¶ 193–196, 221–230; Ex. 1008, xi, 3–4, 8, 18–19, 29–33, 39–40, 65–66, 87–91, 103–05).

We determine Petitioner has shown that Boyce, modified in the manner proposed by Petitioner, teaches the preamble, for the reasons summarized above. Petitioner supports its argument that it would have been obvious to modify Boyce with credible testimony from Dr. Wolfe that is un rebutted at this stage of the proceeding. Ex. 1002 ¶¶ 193–196, 221–230.

b) *Limitation 1.1 – “descrambling of said scrambled data of said stream so as to extract therefrom additional data corresponding to information required by at least one function of the special mode or “trick mode” (fast forward, fast rewind, accelerated motion, slow motion, etc.)*

For limitation 1.1 Petitioner identifies Boyce’s trick play information as teaching the “additional data corresponding to information required by . . . the special mode or ‘trick mode.’” Pet. 60–62 (citing Ex. 1005, 16:3–16, 47:46–57, 48:28–51, 49:5–13, Fig. 10(a); Ex. 1002, ¶¶ 197–202). As to the “descrambling of said scrambled data” Petitioner argues that “[h]aving modified Boyce, to support ‘scrambled digital video stream,’ a POSITA would have also been motivated and found it obvious to modify Boyce to also ‘descramble’ the ‘scrambled digital video streams.’” *Id.* at 62.

We determine that when Boyce is modified as proposed by Petitioner to record a scrambled digital video stream in its scrambled form, that Petitioner has shown Boyce teaches limitation 1.1 for the reasons stated above. Petitioner supports its arguments with credible testimony from Dr. Wolfe. Ex. 1002, ¶¶ 197–202.

c) *Limitation 1.2 – “recording of these additional data on the recording medium”*

For limitation 1.2, Petitioner argues Boyce’s Data Filter 308 and VTR Recording Circuit 300, identify trick play information for recording on videotape, which Petitioner contends corresponds to the claimed “recording of . . . additional data on the recording media.” Pet. 62–63 (citing Ex. 1005, 19:3–14, 37:54–38:5, 49:46–65, 50:39–65; Ex. 1002, ¶¶ 204–08).

We determine Petitioner has shown that Boyce teaches recording of its trick play information on Boyce’s videotape and thus teaches recording additional data on the recording medium.

3. *Analysis of 2–4*

Claims 2–4 depend directly from independent claim 1. Based on a review of the current record at this stage of the proceeding, Petitioner has made a sufficient showing that claims 2–4 would have been obvious over Boyce. *See* Pet. 63–66. Patent Owner has not provided a separate response to these arguments at this stage of the proceeding. *See generally* Prelim. Resp.

4. *Conclusion –Obviousness over Boyce (Ground 4)*

Accordingly, having considered the arguments and evidence, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on its challenge to claims 1–4 of the ’752 patent as obvious over Boyce.

H. *Obviousness over Boyce and Lee (Ground 5)*

Petitioner argues claims 1–4 of the ’752 patent would have been obvious over Boyce and Lee. Pet. 70–79. Petitioner relies on Boyce in much the same way as it did for Ground 4, except that Petitioner relies on Lee to teach that it would have been obvious to record scrambled digital

video stream in its scrambled state. *See* Pet. 74–75, 77–79. Below we analyze Petitioner’s contentions in light of Patent Owner’s arguments.

I. Analysis of Claim 1

Petitioner provides detailed analysis demonstrating that the combination of Boyce and Lee teaches or suggests the preamble and limitations 1.1–1.2. Pet. 70–75. Petitioner supports its arguments with citations to Boyce, Lee, and to the testimony of Dr. Wolfe. Patent Owner does not separately dispute Petitioner’s contentions regarding the obviousness of any of these limitations. Rather, Patent Owner relies on its arguments under § 325(d) which we addressed above. Prelim. Resp. 18. At this stage of the proceeding, we are persuaded that Petitioner has demonstrated a reasonable likelihood that Boyce and Lee teach or render obvious the preamble and limitations 1.1–1.2 for the reasons provided by Petitioner.

a) Preamble – “A process for recording, on a recording medium, a scrambled digital video stream, implementing the following steps, in addition to the recording of the scrambled data”

Petitioner argues for the reasons set forth above in Ground 4 that Boyce discloses the preamble. Pet. 70–59 (citing Ex. 1005, 16:3–14, 36:53–37:6, 37:54–38:5, Fig. 10(a); Ex. 1002, ¶¶ 233–43).

Further, Petitioner argues in the alternative that Lee’s “Receiving apparatus 6 receives, processes, and records a scrambled digital (e.g., MPEG) television signal,” which Petitioner corresponds to the claimed “scrambled digital video stream.” Pet. 73 (citing Ex. 1006, 5:39–65; Ex. 1002, ¶ 234–43). Petitioner identifies Lee’s Conditional Access 13 gateway for authorizing scrambled MPEG recording on recording portion 24 as the respective “scrambled digital video stream” and “recording[] on a recording

medium,” recited in the preamble. *Id.* at 25–28 (citing Ex. 1004, 1:60–2:42, 3:30–65, 12:3–14, Figs. 1, 7; Ex. 1002, ¶¶ 32–40, 101–07). Petitioner argues it would have been obvious to incorporate Lee’s Conditional Access Circuit 13 and descrambling functionality into Boyce’s Digital VTR. *Id.* at 74 (citing Ex. 1002 ¶¶ 234–43). Petitioner argues that “Lee expressly provides that the disclosed conditional access functionality is ‘readily implemented by presently available television receiving apparatus and electronic components’ and discloses how this functionality would be implemented in accordance with existing television broadcasting standards and formats.” *Id.* (citing Ex. 1006, 3:35–4:13; Ex. 1002 ¶¶ 234–43). Petitioner argues it would have been obvious to modify Boyce in light of Lee’s teachings to record scrambled digital video stream in its scrambled form to prevent unauthorized access to the audio/video content on the recording medium. *Id.* at 74–75 (citing Ex. 1002 ¶¶ 234–43).

At this preliminary stage we determine Petitioner has shown a reasonable likelihood that the combination of Boyce and Lee renders obvious the preamble for the reasons summarized above. Petitioner supports its contentions here with credible testimony from Dr. Wolfe which is un rebutted at this stage of the proceeding. Ex. 1002 ¶¶ 234–43.

b) *Limitation 1.1 – “descrambling of said scrambled data of said stream so as to extract therefrom additional data corresponding to information required by at least one function of the special mode or “trick mode” (fast forward, fast rewind, accelerated motion, slow motion, etc.)*

For limitation 1.1, Petitioner argues for the reasons set forth above in Ground 4 that Boyce discloses this limitation or at least would have rendered it obvious. Pet. 75 (citing Ex. 1002, ¶ 244). Petitioner also argues that Lee discloses extracting special trick data, which Petitioner corresponds to the claimed “descrambling . . . to extract . . . additional data corresponding to

information required by at least one function of the special mode or ‘trick mode.’” *Id.* (citing Ex. 1006, 6:36–7:3).

We determine that the combination of Boyce and Lee teaches limitation 1.1 for the reasons stated above. Petitioner supports its arguments with credible testimony from Dr. Wolfe. Ex. 1002, ¶ 244.

c) *Limitation 1.2 – “recording of these additional data on the recording medium”*

For limitation 1.2, Petitioner argues for the reasons set forth above in Ground 4 that Boyce discloses this limitation or at least would have rendered it obvious. Pet. 75 (citing Ex. 1002, ¶ 246; Ex. 1006, 6:36–7:3). We determine, as we did in Ground 4, that Boyce teaches limitation 1.2.

2. *Analysis of 2–4*

Claims 2–4 depend directly from independent claim 1. Based on a review of the current record at this stage of the proceeding, Petitioner has made a sufficient showing that claims 2–4 would have been obvious over Boyce and Lee. *See* Pet. 76–77. Patent Owner has not provided a separate response to these arguments at this stage of the proceeding. *See generally* Prelim. Resp.

3. *Conclusion –Obviousness over Boyce and Lee (Ground 5)*

Accordingly, having considered the arguments and evidence, we are persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on its challenge to claims 1–4 of the ’752 patent as obvious over Boyce and Lee.

I. *Due Process*

Patent Owner makes two constitutional challenges, arguing (1) that “[t]he Office’s Removal of Institution Decision-Making from the Director Violates the Law and the Constitution” and (2) that “[t]he IPR Process

Violates Due Process Due to Structural Bias Against Patent Owners.”

Prelim. Resp. 21– 27. We decline to address the specifics of Patent Owner’s constitutional challenges because they have been addressed by our reviewing court. *See Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1033 (Fed. Cir. 2016); *Mobility Workx, LLC v. Unified Patents, LLC*, 15 F.4th 1146 (Fed. Cir. 2021); *In re Palo Alto Networks, Inc.*, 44 F.4th 1369 (Fed. Cir. 2022). Furthermore, the Director has always retained and continues to retain the authority to review institution decisions *sua sponte* after issuance.²

III. CONCLUSION

Petitioner has demonstrated a reasonable likelihood of prevailing in showing the unpatentability of at least one challenged claim of the ’752 patent. At this stage of the proceeding, however, we have not made a final determination with respect to the patentability of the challenged claims.

IV. ORDER

For the foregoing reasons, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–4 of the ’752 patent is instituted with respect to all grounds of unpatentability set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the ’752 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

² *See* Interim process for Director Review § 22, available at <https://go.usa.gov/xuHwP>

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Patent 7,079,752 B1

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