

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA SOLUTIONS, INC.,
Petitioner,

v.

STELLAR, LLC,
Patent Owner.

IPR2024-01284
Patent 8,310,540 B2

Before BRIAN J. McNAMARA, NABEEL U. KHAN, and
BRIAN P. MURPHY, *Administrative Patent Judges*.

KHAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Motorola Solutions, Inc. (“Petitioner”)¹ filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–19 (“the challenged claims”) of U.S. Patent No. 8,310,540 B2 (“the ’540 patent,” Ex. 1018). Stella, LLC (“Patent Owner”)² timely filed a Preliminary Response (Paper 8, “Prelim. Resp.”).

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). Per Board practice, if the Board institutes trial, it will institute “on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” *See* 37 C.F.R. § 42.108(a). Having considered the arguments and evidence presented by Petitioner and Patent Owner, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing on at least one of the challenged claims of the ’540 patent. We exercise our discretion to institute *inter partes* review and, as required, we do so as to all the challenged claims of the ’540 patent on all the grounds of unpatentability set forth in the Petition.

B. *Related Proceedings*

The parties identify the following pending matter as involving the ’540 patent: *Stellar, LLC v. Motorola Solutions, Inc. et al.*, Case No. 4:23-

¹ Petitioner identifies Motorola Solutions, Inc. and WatchGuard Video, Inc. as the real parties-in-interest. Pet. 79.

² Patent Owner identifies Stellar, LLC as the real party-in-interest. Paper 4, 1.

cv-750 (E.D. Tex.) (“parallel litigation”). Pet. 79; Paper 4, 1. Patent Owner identifies the following AIA proceedings as involving patents asserted in the parallel litigation that are directly or indirectly related to the ’540 patent:

IPR2024-01205, IPR2024-01206, IPR2024-01207, IPR2024-01208, IPR2024-01285, IPR2024-01313, and IPR2024-01314. Paper 4, 1.

C. The ’540 Patent (Ex. 1018)

The ’540 patent, titled “Loop Recording with Book Marking,” issued November 13, 2012. Ex. 1018, codes (45), (54). The ’540 patent describes itself as relating to:

[M]ethods in which a camera can store discrete segments of imaged data, using a sensor in the camera to capture image data, using multiple portions of a memory as a loop in which to record the segments in approximately real time, and protecting the multiple portions from being overwritten by subsequent recording in the loop. Recorder continues to record the image data immediately after ending at least one of the segments or immediately after protecting at least one of the segments. Protected data or segments can be wirelessly transmitting a first one of the segments to a memory, and releasing a corresponding one of the multiple portions of memory from protection. Recorder and signal switch are located or as part of an accessory, such as a pair of glasses.

Id. at code (57).

Figure 2 of the ’540 patent is reproduced below.

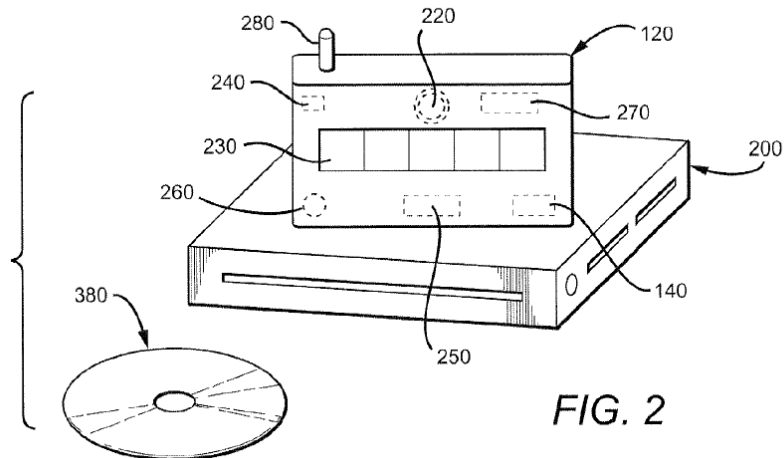


Figure 2 is a camera embodying the inventive subject matter of the '540 patent. Ex. 1018, 2:49–50. “Recorder 120 comprises imager lens 220, memory 140, control buttons 230, microprocessor 240, power source 250, microphone 260, hard drive 270, transmitter 280 and optional display screen.” *Id.* at 3:11–14. The '540 patent explains that the recorder is typically a digital video camera or camcorder. *Id.* at 3:15–18. Memory 140 may include hard drives, flash memory cards, SDRAM, SIMM, or DIMM with varying capacities. *Id.* at 3:39–48. Once the recorder is turned on, image data is continuously stored in a loop memory. *Id.* at 3:55–57.

The '540 patent explains that it is preferred that the entire loop is treated and stored as a single file, so that if no recording is protected, the entire file will be erased and recording will start at the beginning of the loop. *Id.* at 4:3–7. The user can decide to protect a portion of the data being recorded by sending a signal with the use of a switch. *Id.* at 4:19–21. Once the signal is activated protected data is marked and protected for a period of time. *Id.* at 4:32–33. Protected data is stored separately from the loop. *Id.* at 4:42–43. Unprotected data will be overwritten by new data once the memory has reached its full capacity. *Id.* at 4:49–51. The '540 patent also

explains that microprocessor 240 is programmed to allow editing function upon receiving image data or protected data. *Id.* at 5:28–30.

D. Illustrative Claim

Claim 1 is the sole independent claim of the '540 patent and is reproduced below with limitation identifiers in brackets corresponding to claim analysis headings in the Petition. *See, e.g.*, Pet. 19–35.

1. [Preamble] A method of storing discrete segments of imaged data in a camera, comprising:

[Element 1] using a sensor in the camera to capture image data;

[Element 2] providing a recorder coupled to the camera and having a memory;

[Element 3] using multiple portions of the memory as a memory loop in which to record segments of the image data in approximately real time;

[Element 4] treating the memory loop as a single file;

[Element 5] protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop; and

[Element 6] allowing the editing of the imaged data in protected multiple portions stored in the memory loop within the single file via a recorder control while recording additional segments of the image data in the memory loop within the single file.

Ex. 1018, 8:19–36.

E. Evidence

The Petition relies on the following references:

Reference	Exhibit No.
US 2002/0191952 A1; filed Apr. 9, 2002; published Dec. 19, 2002 (“Fiore”).	1009

Reference	Exhibit No.
EP 1 064 783 B1; filed Mar. 25, 1999; published June 4, 2003 (“Mann”).	1015
US 7,158,167 B1; filed Sept. 9, 1998; issued Jan. 2, 2007 (“Yerazunis”).	1017
US 2004/0008255 A1; filed July 11, 2002; published Jan. 15, 2004 (“Lewellen”).	1019
US 5,982,418; issued Nov. 9, 1999 (“Ely”).	1020
US 6,563,532 B1; filed Apr. 21, 2000; issued May 13, 2003 (“Strub”).	1046

Petitioner also relies on the Declaration of Nabil J. Sarhan, Ph.D. (Ex. 1051) in support of its arguments. The parties rely on other exhibits as discussed below.

F. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–19 would have been unpatentable on the following grounds:

Ground	Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis
1a ⁴	1–7, 9–15, 19	103(a)	Yerazunis, Fiore
1b	16–18	103(a)	Yerazunis, Fiore, Mann
1c	8	103(a)	Yerazunis, Fiore, Strub
2a	1–7, 9–14, 19	103(a)	Ely, Fiore
2b	15	103(a)	Ely, Fiore, Lewellen
2c	16–18	103(a)	Ely, Fiore, Mann
2d	8	103(a)	Ely, Fiore, Strub

II. EXERCISE OF DISCRETION

In the Preliminary Response, Patent Owner contends that we should exercise our discretion to deny the Petition in favor of the parallel litigation. Prelim. Resp. 5–18. The Board has held that the advanced state of a parallel district court action is a factor that may weigh in favor of denying a petition under § 314(a). *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential); Trial Practice Guide, 58 & n.2. We consider the following factors to assess “whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding”:

³ 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 effective March 16, 2013. Because the ’540 patent was filed before this date, the pre-AIA versions of 35 U.S.C. §§ 102 and 103 apply. *See* Ex. 1010, code (22).

⁴ Because Petitioner describes each ground as obvious over a primary reference “alone or as combined with” other references, each “Ground” includes two possible grounds of obviousness. However, for purposes of this Decision, we analyze each ground as if it were over all the listed references combined. *See, e.g.*, Pet. 7 (“**Ground 1a**: Claims 1–7, 9–15, and 19 would have been obvious under 35 U.S.C. § 103 over [Yerazunis] *alone or as combined with* [Fiore].” (emphasis added)); *see generally id.* at 6.

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). In evaluating these factors, we “take[] a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6. With these factors and guidance in mind, we consider parties’ contentions.⁵

1. Factor 1 – Whether the court granted stay or evidence exists that one may be granted if a proceeding is instituted

“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.” *Fintiv*, 6. *Fintiv* indicated that, in previous Board decisions, the existence of a district court stay pending Board resolution of an *inter partes* review has weighed strongly against discretionary denial, while a denial of such a stay request sometimes weighs in favor of discretionary denial. *Id.* at 6–8.

⁵ The June 21, 2022 memorandum titled “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” has been rescinded by the Office. *See* <https://www.uspto.gov/about-us/news-updates/uspto-rescinds-memorandum-addressing-discretionary-denial-procedures>.

On February 24, 2025 the District Court in the parallel litigation issued an order temporarily staying all deadlines and hearings scheduled in the matter.⁶ Ex. 1058, 1–2. The District Court’s order notes that Patent Owner asserts 8 patents in the litigation, that IPRs have been instituted on 4 of those patents covering 10 of the 14 claims asserted in the litigation, and that further consideration of a stay will depend upon whether IPRs are instituted on patents including the 4 remaining claims. *Id.* at 1, 3. The District Court also ordered the parties to update their positions on a stay within one week of a decision on institution. It is unclear if, and when, a new trial date would be set. In light of this stay, we determine that this factor weighs strongly against discretionary denial.

2. *Factor 2 – Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

The proximity factor in *Fintiv* asks us to evaluate our discretion in light of a trial date that has been set in a parallel litigation. *See Fintiv*, 3, 5 (“*NHK* applies to the situation where the district court has set a trial date to occur earlier than the Board’s deadline to issue a final written decision in an instituted proceeding.”; “When the patent owner raises an argument for discretionary denial under *NHK* due to an earlier trial date, the Board’s decisions have balanced the following factors”) (citing *NHK*, Paper 8 at 20). As noted above in the discussion of the first factor, *Fintiv* cites concern regarding “inefficiency and duplication of efforts.” *Id.* at 6. In its analysis of the proximity factor, *Fintiv* echoes that concern in its guidance that “[i]f the court’s trial date is at or around the same time as the projected statutory

⁶ Patent Owner had argued in its Preliminary Response that “Petitioner has not sought a stay in the district court” but this argument was made before the district court’s February 24, 2025 order.

deadline or even significantly after the projected statutory deadline, the decision whether to institute will likely implicate other factors discussed herein, such as the resources that have been invested in the parallel proceeding.” *Id.* at 9. Similarly, in *NHK*, the Board expressed the concern that a trial before the deadline for a final written decision addressing the same prior art and arguments would have undermined the Board’s objectives of providing an effective and efficient alternative to district court litigation. *See NHK*, 20 (citing *General Plastic Indus. Co., Ltd. v. Cannon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017 (precedential))).

Patent Owner argues that the trial date is over eight months before the expected date of a Final Written Decision in this proceeding and that this favors denial. *Id.* at 10–11. This argument, however, was made before the district court stayed its deadlines and hearings pending issuance of our institution decisions in this IPR and three related IPR proceedings. In light of the district court’s stay, we determine this factor weighs against exercising discretion to deny institution.

3. *Factor 3 - Investment in the parallel proceeding by the court and the parties*

If, at the time of the institution decision, the district court has issued substantive orders related to the challenged patent, such as a claim construction order, this fact weighs in favor of denial. *See Fintiv*, 9–10. On the other hand, if the district court has not issued such orders, this fact weighs against discretionary denial. *Id.* at 10.

Patent Owner emphasizes that, given the advanced state of the parallel litigation, the District Court and the parties have expended significant time and resources in preparing the parallel litigation for trial. Prelim. Resp. 11–

14. Patent Owner advises that the District Court has appointed a technical advisor, considered extensive claim construction briefs, held a hearing and entered a *Markman* ruling on sixteen claim terms, and had yet to decide *Daubert* motions at the time Patent Owner filed its Preliminary Response. *Id.* at 13–14.

Although we are sensitive to the expenditure of time and effort preparing for trial in the parallel litigation, we also recognize that a significant amount of work still remains to be done. For example, Patent Owner points to its infringement contentions containing over 850 pages of claim charts alleging infringement of 14 claims over 8 asserted patents, as well as Petitioner’s invalidity contentions based on over 115 prior art references. *Id.* at 12–13. Moreover, the recently ordered stay of deadlines and hearings indicates that the district court is sensitive to the amount of work still remaining.

In light of the above, we determine this factor weighs against exercising our discretion to deny institution.

4. *Factor 4 - Overlap between issues raised in the petition and in the parallel proceeding*

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial.” *Fintiv*, 12. “Conversely, if the petition includes materially different grounds, arguments, and/or evidence than those presented in the district court, this fact has tended to weigh against exercising discretion to deny institution under *NHK*.” *Id.* at 12–13. A stipulation as in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (PTAB Dec. 1, 2020) (precedential as to § II.A), if one is entered, would be highly relevant.

Patent Owner argues that the “references relied on in the Petition substantially overlap with those in its Invalidity Contentions and the arguments are redundant of the opinions in its opening expert report.”

Prelim. Resp. 14. Patent Owner specifically points out that the combinations of Yerazunis with Fiore and Ely with Fiore, asserted here, are the same as those in Dr. Sarhan’s opening expert report in the parallel litigation. *Id.*

On December 10, 2024, Petitioner offered a stipulation, stating that, upon institution of this proceeding, Petitioner “will not pursue as to the challenged claims any ground raised or that reasonably could have been raised during the IPR” in the parallel litigation. *See* Ex. 2015 (filed in this proceeding Dec. 20, 2024). Petitioner’s stipulation applies to the following proceedings, which includes this proceeding: IPR2024-01284, challenging claims 1-19 of U.S. Patent No. 8,310,540; IPR2024-01285, challenging claims 1-18 of U.S. Patent No. 8,928,752; IPR2024-01313, challenging claims 1-25 of U.S. Patent No. 10,523,901; and IPR2024-01314, challenging claims 1-20 of U.S. Patent No. 10,965,910. With respect to this proceeding, Petitioner’s stipulation applies to all claims in the ’540 patent.

Although Patent Owner has identified areas of overlap between this proceeding and the parallel proceeding, Petitioner’s stipulation mitigates concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions. *See, Sotera*, 19. Moreover, the stay of hearings and deadlines in the parallel litigation also mitigates concerns of duplicative efforts and potentially conflicting decisions. *Fintiv*, 6 (“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts.”). We determine this factor weighs strongly against discretionary denial.

5. *Factor 5 – Whether the petitioner and the defendant in the parallel proceeding are the same party*

Patent Owner notes that Petitioner and its real party-in-interest (WatchGuard Video, Inc., acquired by Petitioner in 2019) are the only defendants in the parallel litigation. Prelim. Resp. 15 (citing Ex. 2013). This factor, therefore, weighs in favor of discretionary denial.

6. *Factor 6 – Other circumstances that impact the Board’s exercise of discretion, including the merits*

As discussed below, on this preliminary record, Petitioner has met its burden of demonstrating a reasonable likelihood that it would prevail in showing that claims of the ’540 patent are unpatentable. Although we recognize the record may change during trial, as discussed in detail below, Petitioner has made a strong showing, on the record presently before us, that the prior art references cited in the Petition teach or suggest all limitations of at least one challenged claim. *See Fintiv*, 14– 15 (discussing the merits of the Petition as a consideration). We, therefore, determine that this factor weighs against discretionary denial.

7. *Conclusion*

We take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” when considering the six *Fintiv* factors. *Fintiv*, 6. Based on our holistic review of the *Fintiv* factors, we find that the district court’s stay of proceedings, Petitioner’s *Sotera* stipulation, and the merits of Petitioner’s case outweigh the other factors. For these reasons, we decline to exercise our discretion to deny institution under § 314(a). We now address the substantive issues presented in the Petition.

III. ANALYSIS

A. *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 patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. 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-obviousness⁷. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. *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’ declarant, Dr. Sarhan, opines that a person of ordinary skill in the art in the field “would have been a person having at least a Bachelor’s

⁷ Neither party has introduced any objective evidence of nonobviousness.

Degree in electrical engineering, computer science, or computer engineering, or undergraduate training in an equivalent field and at least two years of relevant experience in electronics technology.” Ex. 1051 ¶ 30. Dr. Sarhan further opines that “[a]dditional graduate education could substitute for professional experience, and significant work experience could substitute for formal education.” *Id.*

Patent Owner does not contest Petitioner’s proposed level of ordinary skill. *See generally* Prelim. Resp.

For purposes of this Decision, we adopt Petitioner’s proposed level of ordinary skill, which is supported by Dr. Sarhan’s testimony, 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.

C. 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.”).

a) “file”

Petitioner argues that “the term ‘file’ should be given its plain and ordinary meaning as of June 2007, which was ‘an identifiable collection of data.’” Pet. 10 (citing Ex. 1051 ¶¶ 113–119). Petitioner argues that in the ’540 patent, the entire circular buffer is treated as a file and write-protected segments are also treated as files. *Id.* at 10 (citing Ex. 1001, 2:29–51, 5:66–6:7, 9:18–26). According to Petitioner, the ’540 patent does not describe any particular file type or structure for these files. *Id.* at 11. Petitioner also argues that the prosecution history does not limit the claimed files to any particular type of file. *Id.* at 11 (citing Ex. 1011, 77; Ex. 1013, 285–286). Petitioner also relies on several dictionary definitions as supporting its construction of the term file. *Id.* at 11–12 (citing Ex. 1025, 3; Ex. 1026, 3; Ex. 1027, 3).

Patent Owner asserts that “Petitioner’s vague and unduly broad definition of ‘file’ is not only contradicted by the prosecution history, but also the extrinsic evidence it relies upon.” Prelim. Resp. 4. Patent Owner states that it “reserves the right to present claim construction arguments if trial is instituted.” *Id.* at 4. Patent Owner cites the prosecution history of a related patent to argue that the term “file” indicates “something that would ‘facilitate [the] exchange of data’ and eliminate the need for further ‘processing.’” *Id.* at 25–27 (quoting Ex. 1013, 285–286). Patent Owner also

argues that the prosecution history shows that the recited files are stored within the circular buffer as opposed to being stored elsewhere. *Id.* at 27. Finally, Patent Owner argues that Petitioner’s proposed construction is “inconsistent with logic and common understanding” and “at odds with its own extrinsic evidence.” *Id.* at 27–28 (citing Ex. 1025, 3; 1026, 3; 1027, 3).

Having reviewed the parties’ arguments we determine, as explained further below in our analysis of claim 1 (§ III.D.4.a), that an express construction of the term “file” is not necessary 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, Patent Owner’s Sur-reply, or otherwise during trial, as permitted by our rules.

*D. Obviousness over the Combination of Yerazunis and Fiore
(Ground 1a)*

Petitioner argues claims 1–7, 9–15, and 19 of the ’540 patent would have been obvious over Yerazunis in combination with Fiore. Pet. 12–45. Below we provide a brief overview of Yerazunis and Fiore and then analyze Petitioner’s contentions in light of Patent Owner’s arguments.

1. Yerazunis (Ex. 1017)

Yerazunis is titled “Video Recording Device for a Targetable Weapon,” and relates to “a video recording device which is adapted to store video images corresponding generally to the area surrounding the sighting area of a targetable weapon such as a gun.” Ex. 1017, code (54), 1:18–21.

Yerazunis discloses a video recording device that “records video frames successively in at least one circular buffer memory organized as a continuous loop overwriting the oldest frame within the respective buffer memory with a more recently received frame.” Ex. 1017, 2:19–23.

According to Yerazunis,

[u]pon detection of a trigger event, the video recording device records a predetermined number of additional frames and then ceases to record further frame data. In this manner, a video event record is obtained which commences prior to the triggering event and extends in time after the triggering event.

Id. at 2:53–58.

Yerazunis also describes an embodiment in which such a video recording device is mounted to a targetable weapon, such as a gun, and aligned so as to record images surrounding the line of fire of the weapon. Ex. 1017, 3:9–12. Upon the removal of the gun from a holster, the video recording device starts recording of video frames to the circular buffer memory and, upon detection of the firing signal, stores additional frames for a short period of time. *Id.* at 3:17–20, 3:25–28. According to Yerazunis, “[u]pon a firing event, specified frame data associated with that firing event both before and after the event is preserved and cannot be overwritten as a result of further use of the gun or subsequent firing events.” *Id.* at 3:28–31.

Figures 9, 10a, and 10b of Yerazunis, reproduced below, depict a gun having a video recording device mounted below the barrel of the gun and its use. Ex. 1017, 4:7–14.

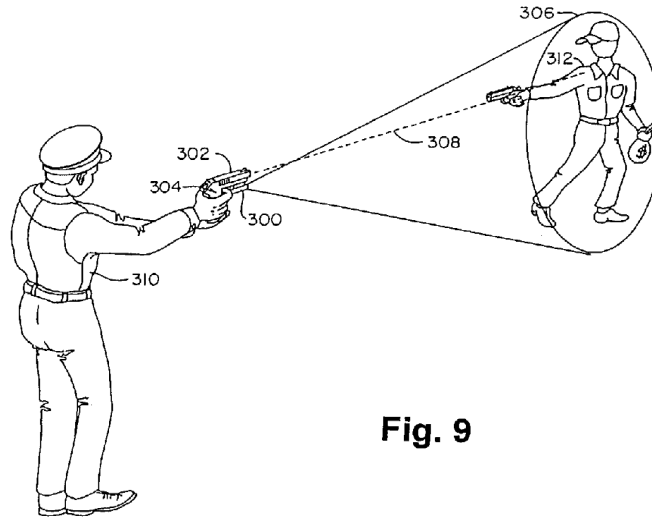


Fig. 9

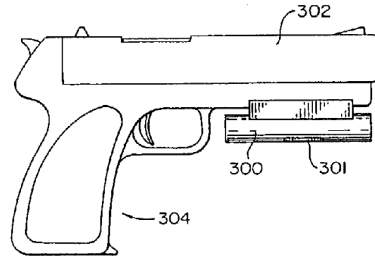


Fig. 10a

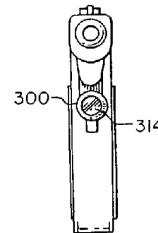


Fig. 10b

Figures 10a and 10b depict a video recording device 300 mounted below the barrel 302 of the gun 304. *Id.* at 15:24–25. Figure 9 shows that the video recording device 300 has “a field of view 306 generally surrounding the line of fire or target line 308 of the gun 304.” *Id.* at 14:47–50. According to Yerazunis,

the video recording device 300 includes a sensor, which is responsive to the discharge of the gun 304 to cause the video recording device 300 to continue to record for a brief interval following the discharge of the gun into a designated portion of a memory and to then preserve video frame information generated before and after the discharge of the weapon by the officer.

Id. at 14:55–61.

2. *Fiore (Ex. 1009)*

Fiore is titled “Data Recording and Playback System and Method,” and relates to “data recording and playback systems for monitoring processes or occurrences of events which allows the replay and/or analysis of a time sampled signal.” Ex. 1009, code (54), ¶ 3. Specifically, Fiore discloses a data recording and playback system having:

a monitoring device that provides an input signal data, a memory device adapted to receive and temporarily store the input signal data from the monitoring device as data frames with time stamps, the memory device having addresses associated thereto, and a circular storage buffer having a memory mapped file with same address space as the memory device, the circular storage buffer being adapted to receive the temporarily stored input signal data from the memory device, and to store the input signal data in the memory mapped file.

Id. ¶ 20. Fiore describes that “the circular storage buffer stores recent data frames over aged data frames in the memory mapped file.” *Id.* ¶ 21.

According to Fiore, the memory mapped file is “adapted to allow playback of stored input signal data from the circular storage buffer without interrupting simultaneous recording of new input signal data into the circular storage buffer.” *Id.* ¶ 23.

Figure 2 of Fiore, reproduced below, depicts a signal processor used in implementing the data recording and playback system. Ex. 1009 ¶ 27.

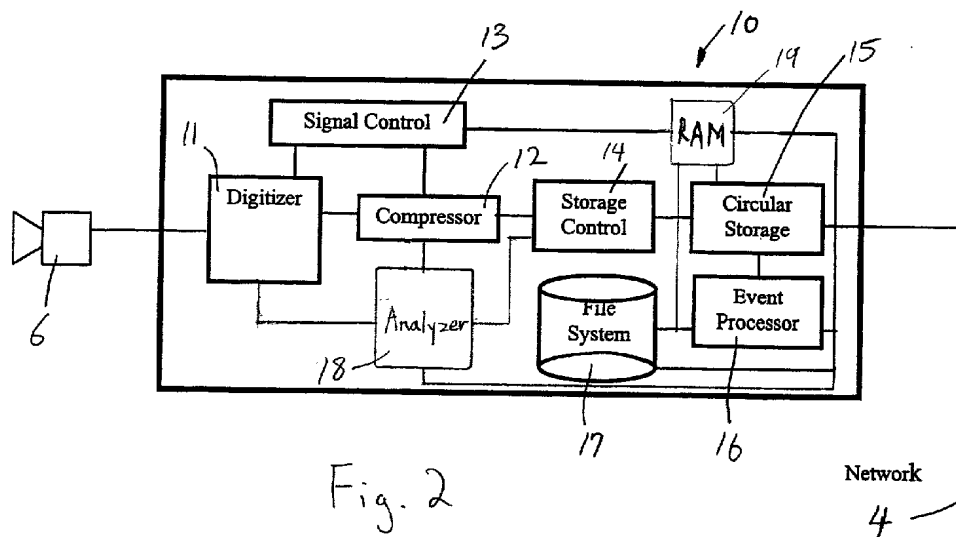


Figure 2 shows the signal processor 10 having a storage control 14 that “receives the digitized and/or compressed input signal data from the monitoring device 6, and stores the input signal data and the analysis data in the circular storage buffer 15 together with a time stamp for each record.”

Id. ¶ 47. According to Fiore,

the circular storage buffer 15 has two unique positions, the head and tail. The head represents the position in the circular storage buffer 15 having the most recent signal data, and the tail position represents the position in the buffer having the oldest signal data that is leaving the circular storage buffer 15, i.e. being overwritten by the most recent signal data.

Id. Fiore also describes that “the circular storage buffer may be implemented as a reserved area in memory, a disk file, or as a storage in a looped media.” *Id.* ¶ 65.

3. Combination of Yerazunis and Fiore

At this stage of the proceeding, we are persuaded that Petitioner has established a reasonable likelihood that a person of ordinary skill would have combined the teachings of Yerazunis and Fiore for the reasons provided by Petitioner. Petitioner’s proposes to combine Yerazunis’ data

recording system with Fiore’s teachings regarding a circular storage buffer implemented as a memory mapped file and its teachings regarding indexing of event data as files within the circular storage buffer. Pet. 18. Petitioner contends that a POSITA would have been motivated to combine Yerazunis and Fiore for multiple reasons, including that both references disclose data recording systems that store data in a circular buffer and preserve data associated with an event. *Id.* at 17. Petitioner also contends that a POSITA would have been motivated to implement Yerazunis’s video recording device with Fiore’s file-based approach for the circular storage buffer because doing so would provide the benefits of having the access speed of Random Access Memory (RAM), making indexing of data transparent to the circular storage buffer’s access objects, and avoiding issues with switching between RAM and disk files. *Id.* (citing Ex. 1009 ¶¶ 22, 23, 51, 59, 60, 65, 67, 68, 72; Ex. 1051 ¶ 165–169). We agree that these benefits would provide sufficient reason for a person of ordinary skill to combine the teachings of Yerazunis and Fiore in the way proposed by Petitioner.

Patent Owner disputes that “a POSITA would have been motivated to combine Yerazunis and Fiore to arrive at the invention of the ’540 patent,” arguing that Yerazunis and Fiore are different than, and in some instances, incompatible with each other but we do not find these arguments to overcome Petitioner’s contentions at this stage of the proceeding. Prelim. Resp. 34. For example, Patent Owner argues that Yerazunis and Fiore are not similar to each other because Yerazunis discloses a compact video recording device for different applications while Fiore discourages reliance on proprietary hardware and instead directs its application to personal computers which provide flexibility to be adapted to various applications. *Id.* (citing Ex. 1051 ¶ 166; Ex. 1009 ¶ 9). This argument, however, is based

on Fiore’s statement that proprietary devices, such as TiVo, are not suited for recording external events based on triggers (as contrasted with recording broadcast signals at specified times). *See* Ex. 1009 ¶¶ 7–9. Yerazunis, however, *does* record external events based on triggers, such as gun triggering events. Ex. 1017, 3:9–35. Thus, based on the present record at this stage of the proceeding, we disagree that Fiore discourages combining its teachings with Yerazunis.

As another example, Patent Owner argues that because Yerazunis stops recording video data after a predetermined number of frames following a trigger, and because it limits the amount of frame data preserved, it is incompatible with a fundamental purpose of Fiore, which is to avoid dropping any frames that would lead to loss of critical data. *Id.* at 35–36, 37 (citing Ex. 1017, 2:53–55, 11:44–13:2; Ex. 1009 ¶¶ 12–13). This argument does not address Petitioner’s proposed combination relying on Yerazunis’ gun embodiment which does not stop recording video after a triggering event. *See* 1017, 17:50–59.

Patent Owner argues that to preserve data, Fiore transfers that data to a different memory location instead of selectively write protecting that data within a circular buffer and because of this reason “a POSITA would not look to Fiore for guidance on a system to write-protect designated portions within a memory loop.” *Id.* at 36 citing (Ex. 1009 ¶¶ 47, 48, 63). Patent Owner also argues that Fiore does not disclose selectively write-protecting individual segments of time-stamped event data within a circular buffer nor does it disclose storing individual event files within a circular buffer. *Id.* at 38 (citing Ex. 1009 ¶¶ 10, 20, 22, 71). Again, these arguments do not fully address the proposed combination in which Petitioner relies on Yerazunis’ gun camera embodiment to teach selective-write protecting individual

segments and storing video data within a circular buffer. *See* Pet. 23–24, 28 (citing Ex. 1017, 2:19–23, 3:25–38, 8:26–30, 15:9–13, 16:66–17:38, 17:9–20, 17:50–59; Ex. 1051 ¶ 177).

4. *Analysis of Claim 1*

Petitioner contends that the combination of Yerazunis and Fiore teach each of the limitations of claim 1, supporting its contentions with evidence from the asserted prior art and from the testimony of Dr. Sarhan. Pet. 19–33. Patent Owner disputes Petitioner’s contentions with respect to certain limitations. Prelim. Resp. 26–38. We have reviewed Petitioner’s contentions for the preamble⁸ and undisputed limitations of claim 1 and are persuaded Petitioner has established a reasonable likelihood that the combination of Yerazunis and Fiore teaches these undisputed limitations. We focus our attention on the disputed elements of claim 1 below.

a) Whether Yerazunis and Fiore Teach “file” Storage

Elements 4 and 5 of claim 1 recite “treating the memory loop as a single *file*” and “protecting the multiple portions, within the single *file*, from being overwritten by subsequent recording in the memory loop.” Ex. 1018, 8:27–30 (emphasis added).

While acknowledging that “Yerazunis does not expressly refer to ‘treating the memory loop as a single file’” Petitioner, nevertheless, argues that a person of ordinary skill in the art would have found it obvious to treat the circular buffer as a single file based on Yerazunis’ disclosure of storing head and tail pointers that define the areas of the circular buffer in which

⁸ Because we determine that Petitioner has demonstrated a reasonable likelihood that the combination of Yerazunis and Fiore teaches the preamble, we need not make a determination, at this stage of the proceeding, whether the preamble is limiting.

video data is stored pertaining to each gun firing event. Pet. 25–26. (citing Ex. 1017, 17:50–56; Ex. 1051 ¶ 182). Petitioner also argues that using multiple files would have been more time consuming than using a single file and that treating the circular buffer as a single file would have been one of a finite number of identified solutions for implementing Yerazunis’ circular buffer. *Id.* at 26 (citing *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“finite number of identified, predictable solutions”). Petitioner also relies, in the alternative, on Fiore which Petitioner argues discloses a circular storage buffer 15 that is treated as a single file. Pet. 26 (citing Ex. 1009 ¶¶ 22–23, 51, 59–60, 71).

Patent Owner points out that Yerazunis does not mention “any ‘file’ at all” and argues Yerazunis does not render obvious the use of a single “file” within a memory loop under a proper construction⁹ of that term. *Id.* at 24. Patent Owner argues that Yerazunis’ use of pointers to reference address locations is not sufficient to demonstrate that it would have been obvious to use a single file to store data in the circular buffer. *Id.* at 25. Patent Owner also argues that Fiore does not disclose storing a data file within a memory loop and instead teaches saving discrete files in a separate database. *Id.* at 28 (Ex. 1009 ¶ 22).

Having reviewed Petitioner’s contentions and Patent Owner’s arguments to the contrary, we are persuaded, at this stage of the proceeding, by Petitioner’s arguments summarized above that the combination of Yerazunis and Fiore teach “treating the memory loop as a single file” and

⁹ Patent Owner’s arguments (Prelim. Resp. 25–28) disputing Petitioner’s construction of “file” are summarized above in the section discussing claim construction.

“protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop.” We note that Petitioner relies, in the alternative, on Fiore for teaching the recited “file” and although Patent Owner argues that Fiore does not disclose storing a data file within a memory loop, Patent Owner does not sufficiently dispute that Fiore teaches a “file.” We, therefore, need not explicitly construe the term “file” for purposes of institution. We agree with Petitioner that Fiore teaches a circular storage buffer that is treated as a single file. For example, Fiore discloses “a circular storage buffer having a memory mapped file” and “stor[ing] the input signal data in the memory mapped file.” Ex. 1009 ¶ 20.

As to Patent Owner’s argument that Yerazunis and Fiore do not store a file within the circular buffer, we disagree. Yerazunis discloses that it stores data within the circular buffer and combined with Fiore’s teaching of storing “input signal data in the memory mapped file,” the combination teaches “treating the memory loop as a single file.” Ex. 1017, 3:25–38, 8:26–30, 15:9–13, 17:48–59; Ex. 1009 ¶ 20.

b) Whether Yerazunis and Fiore Teach “protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop”

Claim 1 recites “protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop.” Ex. 1018, 8:28–30. Petitioner relies on Yerazunis’ gun camera embodiment which discloses an event sensor generating a gun firing signal which “causes ‘specified frame data associated with [the] firing event both before and after the event’ to be ‘preserved,’ such that it ‘cannot be overwritten as a result of further use of the gun or subsequent firing events.’” Pet. 28 (citing Ex. 1017, 3:25–38, 8:26–30, 15:9–13). Petitioner relies further on Yerazunis’

disclosure that data associated with subsequent firing events are stored within unused portions of the circular buffer memory. *Id.* (citing Ex. 1017, 3:31–33). Petitioner also relies, in the alternative, on Fiore’s disclosure of indexing collections of frame data for respective events as multiple portions within a memory mapped file for teaching the preservation of event data as files in Yerazunis’ buffer. *Id.* at 30 (citing Ex. 1009 ¶¶ 22, 23, 51, 59, 60).

Patent Owner disputes that the car implementation or the gun implementation teach “protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop.” Prelim. Resp. 29–32. For both implementations, Patent Owner argues that “Yerazunis discloses a system whereby the entirety of a circular buffer (i.e., all data in the buffer) is preserved in response to a triggering signal by ceasing to record over previously *used* (i.e., recorded) portions of the Yerazunis buffer(s).” Prelim. Resp. 29. The car implementation, according to Patent Owner, “is a simple ‘buffer-record-and-stop’ scheme, in which the video data is stored in a circular buffer until a triggering event, at which point the system records a small amount of additional video, and then stops the recording altogether.” Prelim. Resp. 30 (citing Ex. 1017, 2:19–25; 8:26–32).

In the gun camera implementation, according to Patent Owner, the system uses only unused blocks of memory for each firing event by recording to one unused portion and then switching to record in a second unused portion. Prelim. Resp. 30–31 (citing Ex. 1017, 17:9–15, 56–58). Additionally, Patent Owner points out that Yerazunis’s purge button erases the contents of the circular buffer which further indicates that “the entire contents of the buffer are protected and unprotected as a whole.” *Id.* at 31 (citing Ex. 1017, 9:47–51). As for Fiore, Patent Owner again argues that

Fiore does not write-protect portions of data within a memory loop or circular buffer. *Id.* 32.

At this stage of the proceeding, we are persuaded by Petitioner’s contentions of a reasonable likelihood that the combination of Yerazunis and Fiore teach “protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop.”

Specifically, in the gun implementation, Yerazunis teaches that frame data associated with the firing event both before and after the event is preserved and cannot be overwritten and that data associated with a subsequent firing event is stored in an unused portion of the circular buffer. Ex. 1017, 3:25–38, 8:26–30, 15:9–13.

To the extent Patent Owner argues that preserving data by using unused portions of the circular buffer for subsequent recording does not teach write-protecting that data, we disagree. Yerazunis is explicit that it preserves and prevents overwriting of recorded data (Ex. 1017, 17:48–59), which we determine sufficiently supports Petitioner’s arguments at this stage of the proceeding.

Patent Owner’s argument that Fiore does not teach write protection of portions of data “within a memory loop or circular buffer” does not address Petitioner’s combination which also relies on Yerazunis for storing data within its circular memory buffer. *See* Pet. 28 (citing Ex. 1017, 3:31–33).

c) Whether Yerazunis and Fiore Disclose “allowing the editing of the imaged data in protected multiple portions stored in the memory loop within the single file via a recorder control while recording additional segments of the image data in the memory loop within the single file”

Petitioner argues that Yerazunis teaches editing of the imaged data by disclosing a purge button 76 that, when activated, causes write-protected portions of the circular buffer to be released from protection and causes the

contents of the circular buffer and any still images that have been captured to be erased. Pet. 31 (citing Ex. 1017, 9:47–53). Petitioner emphasizes that the release from protection occurs while recording additional segments of data. *Id.* at 32–33 (citing Ex. 1017, 2:1–8, 2:19–23, 4:45–49, 7:11–14, 9:34–38, 17:56–61). Petitioner also relies on Yerazunis’ disclosure that a date/time may be stamped onto each associated frame. *Id.* at 33 (Ex. 1017, 19:1–9). Finally, Petitioner relies, in the alternative, on Fiore’s disclosure that its memory mapped file and indexing enables multiple processes to read and write to the same memory concurrently. *Id.* at 33 (citing Ex. 1009 ¶¶ 23, 68, 71–72). Fiore’s teachings, according to Petitioner, would enable Yerazunis’ editing to occur while recording. *Id.*

Patent Owner argues that erasing image data altogether “goes beyond the plain and ordinary meaning of ‘edit,’ the dictionary definitions for which generally include the notion of modifying, altering or rearranging information from its original written form.” Prelim. Resp. 33. Patent Owner also argues that overlaying time and date information on digital frame data also goes beyond the plain and ordinary meaning of “edit.” *Id.* at 33–34.

At this stage of the proceeding, we are persuaded of a reasonable likelihood that the combination of Yerazunis and Fiore teaches “allowing the editing of the imaged data in protected multiple portions stored in the memory loop within the single file via a recorder control while recording additional segments of the image data in the memory loop within the single file.” Specifically, we are persuaded at this stage of the proceeding that Yerazunis’ teaching of allowing image data to be purged and the overlaying or stamping of date and time information on frames teaches “editing of the imaged data” as recited in claim 1. Patent Owner’s arguments depend on a narrow interpretation of “edit” that excludes purging of data or stamping of

additional data that we do not agree with at this stage of the proceeding. Patent Owner is expected to assert all claim construction arguments and evidence in the Patent Owner Response and during trial as permitted by our rules. Failure to do so may constitute waiver of these arguments.

5. *Conclusion – Claim 1*

For the foregoing reasons, we determine Petitioner has established a reasonable likelihood that the combination of Yerazunis and Fiore teaches the limitations of claim 1 and a reasonable likelihood that Petitioner will prevail in demonstrating that claim 1 is unpatentable as obvious over Yerazunis and Fiore.

6. *Analysis of Dependent Claims 2–7, 9–15, and 19*

Petitioner addresses each of the limitations of dependent claims 2–7, 9–15 and 19 providing support from Yerazunis, alone or in combination with Fiore, and Dr. Sarhan’s testimony. Pet. 33–45. Because Petitioner demonstrates a reasonable likelihood of success in proving that at least one claim of the ’540 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. See 37 C.F.R. § 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of every claim in the ground challenged by Petitioner, especially, as in this case, when Patent Owner does not separately argue those claims. Those challenges, in our view, are best left for trial after full development of the record.

E. *Obviousness over the Combination of Ely and Fiore (Ground 2a)*

Petitioner argues claims 1–7, 9–14, and 19 of the ’540 patent would have been obvious over Ely, alone or in combination with Fiore. Pet. 52–71. Below we provide a brief overview of Ely and then analyze Petitioner’s contentions in light of Patent Owner’s arguments.

1. *Ely (Ex. 1020)*

Ely is titled “Distributed Video Data Storage in Video Surveillance System,” and relates to a video surveillance system including a central control station and a plurality of video cameras each mounted inside a dome housing unit. Ex. 1020, codes (54), (57). According to Ely, the video surveillance system also includes

[a] video data buffer memory, storing compressed video data generated by the camera, [which] is mounted with each camera in the respective dome unit. Data buffered at the dome units may be selectively protected from over-writing in response to alarm signals and then retrieved for display or tape-recording by the central control station.

Id. at code (57).

Figure 3 of Ely, reproduced below, depicts a video camera unit used in a video surveillance system. Ex. 1020, 5:21–24.

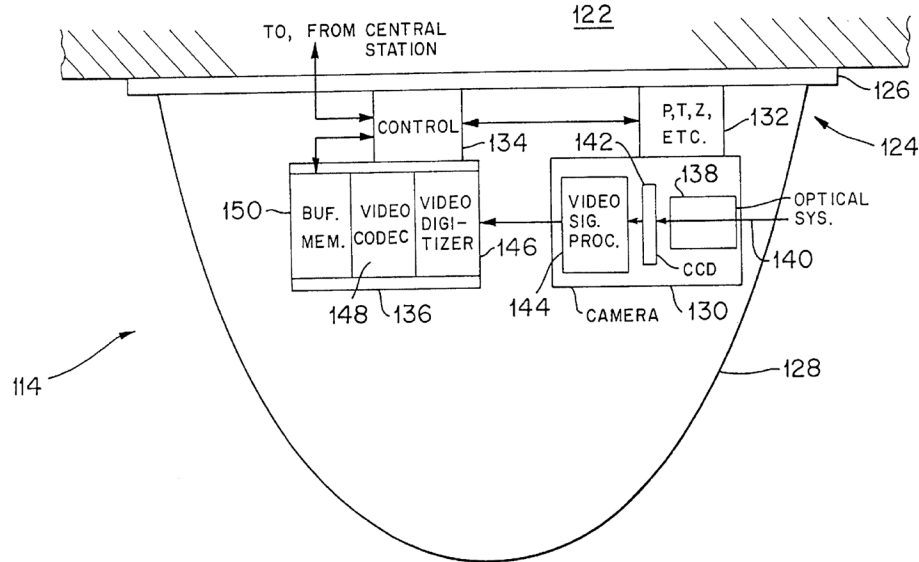


FIG. 3

Figure 3 shows a camera unit 114, which is mounted at a ceiling 122, and includes a housing 124 and a control circuit 134 programmed to carry out memory control, data storage and retrieval functions. *Id.* at 6:4–10, 6:43–46.

The control circuit 134 transmits to the central station compressed video data representing video signals generated by camera 130. *Id.* at 7:17–21. In parallel, “the live compressed video data formed by the video codec 148 is also stored in the memory 150.” *Id.* at 7:26–28. According to Ely,

[p]referably the memory addressing and writing of data into the memory is controlled by the control circuit 134 so that the memory 150 serves as a ring buffer, in which currently generated compressed video data is written over the oldest compressed video data that had previously been stored in the memory 150. However, over-writing of the oldest data is subject to inhibition in response to alarm commands. On such occasions, the live compressed video data is written into a portion of the memory device 150 which does not hold video data that is to be preserved.

Id. at 7:28–38. When the control circuit 134 receives an alarm command,

the control circuit 134 protects from over-writing compressed digital video data previously stored in the memory 150, and corresponding to a time interval beginning at a predetermined time prior to receipt of the alarm command, and continuing for a predetermined time after receipt of the alarm command.”

Id. at 7:48–55.

2. *Combination of Ely and Fiore*

Petitioner argues that a person of ordinary skill in the art “would have been motivated to implement Ely’s video surveillance system with Fiore’s file-based approach for the circular storage buffer and event data stored therein.” Pet. 54. Petitioner argues that Fiore’s file-based approach would provide the same benefits in combination with Ely as it did in combination with Yerazunis under Ground 1a, which we have described above in § III.D.3. *Id.* (“As detailed in Sections IV.A.2, Fiore also describes numerous benefits of its file-based approach.”) Petitioner argues that a person of ordinary skill would have had a reasonable expectation of success because Fiore provides a detailed disclosure of its file-based approach, and

applying those techniques to Ely's surveillance system would have been routine and well within the skill of a person of ordinary skill in the art. *Id.*

Patent Owner argues that Ely's goal is to permanently store video signals on video tape while Fiore is directed to recording on a circular storage buffer. Prelim. Resp. 44–45. According to Patent Owner, Ely's goal of analog storage on video tape would be thwarted if the data were to be transmitted as a digital data file because a digital data file is not stored on video tape. *Id.* at 45. Additionally, Patent Owner argues Fiore does not teach selectively write-protecting segments of data within a circular buffer and therefore a person of ordinary skill would not look to Fiore as guidance on a system to selectively write-protect data segments within a circular buffer. *Id.* at 45–46.

At this stage of the proceeding, we are persuaded that Petitioner has established a reasonable likelihood that a person of ordinary skill would have combined the teachings of Ely and Fiore for the reasons provided by Petitioner and summarized above. Patent Owner's argument that Ely's goal of analog storage would be thwarted by Fiore's teaching of storing files in the circular buffer as digital files is not consistent with Ely's disclosure. Ely discloses that video signals are stored in a ring buffer in digital form. *See* Ex. 1020, 2:55–64, 3:1–5; 6:48–53. Thus, the fact that Ely eventually stores those signals on video tape in analog form, does not necessarily contradict the motivation to combine Ely with Fiore.

Patent Owner's remaining arguments are similar to those it made with respect to the combination of Yerazunis and Fiore in Ground 1a. For the same reasons as before, these arguments are unavailing.

3. *Analysis of Claim 1*

Petitioner contends that the combination of Ely and Fiore teaches each of the limitations of claim 1, supporting its contentions with evidence from the asserted prior art and from the testimony of Dr. Sarhan. Pet. 53–66. Patent Owner disputes certain aspects of Petitioner’s contentions. Prelim. Resp. 38–44. We have reviewed Petitioner’s contentions for the preamble¹⁰ and undisputed limitations of claim 1 and are persuaded Petitioner has established a reasonable likelihood that the combination of Ely and Fiore teaches these undisputed limitations. We focus our attention on the disputed elements of claim 1 below.

a) *Whether Ely and Fiore Teach “file” Storage*

Patent Owner argues that Ely fails to teach “treating the memory loop as a single file” and, in fact, makes no mention of ‘file’ at all. Patent Owner argues that storage of data in a memory loop or buffer would be incompatible of Ely’s final goal of storing data in analog format on video tape. *Id.* at 39–40 (citing Ex. 1020, code (57), 3:29–36, 4:31–35). For these same reasons, Patent Owner argues Ely is incompatible with Fiore. *Id.* Patent Owner also argues that Fiore does not store a data file within a memory loop.

We disagree with Patent Owner’s arguments based on the present record. As Patent Owner acknowledges, Petitioner relies, in the alternative, on Fiore for its teaching of circular storage buffer as single memory-mapped file. Pet. 60 (citing Ex. 1009 ¶¶ 22, 23, 51, 59, 60). Fiore expressly

¹⁰ Because we determine that Petitioner has demonstrated a reasonable likelihood that the combination of Ely, Fiore, and Lewellen teaches the preamble, we need not make a determination, at this stage of the proceeding, whether the preamble is limiting.

discloses “stor[ing] the input signal data in the memory mapped file” which supports Petitioner’s contentions. Ex. 1009 ¶ 20. Patent Owner’s argument that because Ely ultimately stores video on a video tape, it is incompatible with storing video in digital format and, for the same reason, incompatible with Fiore is inconsistent with Ely’s disclosure and the manner in which Petitioner relies on Ely. Petitioner expressly relies on Ely’s ring buffer as teaching the memory loop and, when combined with Fiore, as teaching “treating the memory loop as a single file.” Pet. 60 (stating that a POSITA would have been motivated to turn to Fiore in implementing Ely’s ring buffer.) As explained above, (*see* § III.E.2) Ely discloses that video signals are stored in a ring buffer in digital form. *See* Ex. 1020, 2:55–64, 3:1–5; 6:48–53. Finally, Patent Owner’s argument that Fiore does not teach storing a data file within a memory loop does not address Petitioner’s combination of Ely and Fiore in which video data is stored in Ely’s ring buffer (i.e. in the memory loop).

b) Whether Ely and Fiore Teach “protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop”

Patent Owner argues that Ely fails to teach “write-protecting of ‘portions’ of its buffer memory” and instead teaches “inhibiting” the overwriting of previously recorded data and that this protection mechanism applies to the entire circular buffer, rather than protecting multiple portions of the circular buffer. Prelim. Resp. 41 (citing Ex. 1020, 2:65–3:16, 4:1–8, 7:30–36, 11:67–12:19, 14:24–38). Patent Owner argues that Fiore also does not teach write-protecting portions of data within a memory loop. *Id.* at 42–43.

At this stage of the proceeding, we are persuaded of a reasonable likelihood that Ely teaches “protecting the multiple portions, within the single file, from being overwritten by subsequent recording in the memory loop” as recited in claim 1. Petitioner relies on Ely’s disclosure that when an alarm command is received the “control circuit protects from over-writing compressed digital video data previously stored in the memory 150” and that this protected data “correspond[s] to a time interval beginning at a predetermined time prior to receipt of the alarm command, and continu[es] for a predetermined time after receipt of the alarm command.” Pet 61–62 (citing Ex. 1020, 7:34–38, 7:48–55, 10:11–15). This data “can be selectively retrieved in response to user instruction either for display (block 180) or directly for taperecording (block 182).” *Id.* at 10:17–23. By protecting a specific portion of the memory (pre- and post- alarm) and by allowing for selective retrieval of this protected data, Ely sufficiently supports, at this stage of the proceeding, Petitioner’s argument that Ely designates portions of the circular buffer for write protection. Patent Owner’s argument regarding Fiore does not address the combination of Ely and Fiore.

4. Conclusion – Claim 1

For the foregoing reasons, we determine Petitioner has established a reasonable likelihood that the combination of Ely and Fiore teaches the limitations of claim 1 and a reasonable likelihood that Petitioner will prevail in demonstrating that claim 1 is unpatentable as obvious over the combination.

5. Analysis of Dependent Claims 2–7, 9–14, and 19

Petitioner addresses each of the limitations of dependent claims 2–7, 9–14, and 19 providing support from Ely, alone or in combination with

Fiore, and Dr. Sarhan's testimony. Pet. 66–71. Because Petitioner demonstrates a reasonable likelihood of success in proving that at least one claim of the '540 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. *See* 37 C.F.R. § 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of every claim in the ground challenged by Petitioner, especially, as in this case, when Patent Owner does not separately argue those claims. Those challenges, in our view, are best left for trial after full development of the record.

F. Remaining Grounds 1b, 1c, and 2b–2d

Because Petitioner demonstrates a reasonable likelihood of success in showing that at least one claim of the '540 patent is unpatentable, we institute on all grounds and all claims raised in the Petition. *See* 37 C.F.R. § 42.108(a). Therefore, at this stage of the proceeding, it is not necessary for us to provide an assessment of every challenge raised by Petitioner, especially, as in this case, when Patent Owner does not separately argue all grounds. Those challenges, in our view, are best left for trial after full development of the record.

IV. CONCLUSION

Petitioner has demonstrated a reasonable likelihood of prevailing in showing the unpatentability of at least one challenged claim of the '540 patent and we institute on all grounds raised and all claims challenged in the Petition. At this stage of the proceeding, however, we have not made a final determination with respect to the patentability of the challenged claims.

V. ORDER

For the foregoing reasons, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–19 of the ’540 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 ’540 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2024-01284
Patent 8,310,540 B2

FOR PETITIONER:

Joshua Nightingale
Hilda Galvan
John Marlott
Christopher Buxton
jrnightingale@jonesday.com
hcgaltan@jonesday.com
jamarlott@jonesday.com
cbuxton@jonesday.com

FOR PATENT OWNER:

Jason Shapiro
Timothy Devlin
James Lennon
jshapiro@devlinlawfirm.com
tdevlin@devlinlawfirm.com
jlennon@devlinlawfirm.com