

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.
and
SAMSUNG ELECTRONICS AMERICA, INC.
Petitioners

v.

CLEAR IMAGING RESEARCH, LLC
Patent Owner

Case IPR2020-01394
U.S. Patent No. 9,860,450

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

The Board should deny Petitioners Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.’s (“Samsung” or “Petitioner”) Petition (Paper 2), which challenges the claims of U.S. Patent No. 9,860,450 (“the ’450 patent”).

The Board should exercise its discretion and deny institution under 35 U.S.C. § 314 because the trial in the co-pending district court proceeding will take place before almost one year prior to any Final Written Decision that would arise from this proceeding. Moreover, the stipulation filed in connection with this Petition (SAMSUNG-1022) is meaningless in view of the volume of prior art asserted by Samsung in the district court case and the fact that the stipulation relates solely to the very specific combination of references relied on in this Petition. Samsung is also asserting system-based prior art in the district court, so there is simply no scenario in which the resolution of this Petition will resolve the validity question before the jury in the co-pending case.

Moreover, Samsung’s Petition fails on the merits. Allen does not disclose “an imaging device” that is capable of processing and motion correction of recorded images. Allen discloses a single embodiment in which both video and sensor data are exported to an external processing system that compensates for camera motion. Allen in fact teaches away from the claimed imaging device, noting that the processor in the imaging device “does not need to perform complex

computations, but instead merely records, and in some embodiments digitizes, and sensor and zoom data and provides it as a data stream on sensor data bus 32.” SAMSUNG-1005, 5:8-14. Allen also does not disclose combining images to obtain or storing a “final video.” Instead Allen discloses a post-processing system like those discussed in the background section of the ’450 patent.

Similarly, Gal likewise discloses post-processing of images to compensate for motion or shaking. Gal, like Allen, discloses a camera with a biaxial position sensor that outputs images and motion data to a separate computer. Samsung also does not provide any theory how Gal discloses storage of unmodified images (as originally captured by “an imaging device”). A “final video” is never truly combined from multiple images or stored—and certainly not combined or stored on an imaging device.

Samsung seeks to remedy the deficiencies in Allen and Gal by combining those references with Akifumi. But there is simply no motivation for a POSITA to make such a combination. First, as mentioned above, Allen teaches away from on-device processing, and Akifumi does not teach storage of captured images and motion data. The only support for the combination proposed by Samsung comes from conclusory statements from its expert declarant. The lack of evidence arising from the references themselves and the general, unsubstantiated statements of

benefit relied on by the expert make it clear that the combination of Allen or Gal with Akifumi is nothing more than hindsight.

The remaining art cited by Samsung—Creative Camcorder and Balmer—relate to specific dependent claims and do not remedy the deficiencies in Allen, Gal, or the combination of those references with Akifumi. In fact, the system disclosed in Creative Camcorder is substantively different than what is recited in the Challenged Claims. Creative Camcorder teaches a system in which a prism positioned adjacent to the CCD is adjusted, by prism actuators, to compensate for camera movement before an image is even captured by the CCD. And Allen teaches away from the type of complex, multi-processor system that is disclosed in Balmer.

As in many cases before the Board, this Petition arises from a co-pending district court case that is set for trial within a month of the potential date of institution. For the reasons identified below, the Board should deny institution under 35 U.S.C. § 314 and on the merits because Samsung has failed to meet its burden and show a reasonable likelihood that any of the Challenged Claims are unpatentable.

II. CLEAR IMAGING IS AN INNOVATIVE COMPANY THAT BROUGHT IMAGE CORRECTION AND SELECTIVE BLUR REDUCTION TO DIGITAL PHOTOGRAPHY

Dr. Ozluturk, the sole inventor of the patents-in-suit, founded Clear Imaging in 2004. Dr. Ozluturk was awarded a Ph.D. in Electrical Engineering from University of Massachusetts, Amherst in 1994 and worked as an engineer at InterDigital, a mobile technology research and development company with over 300 employees, for almost 20 years. It was at this time that Dr. Ozluturk developed a collaborative relationship with Samsung.

Combining his background in electrical engineering and signal processing with his knowledge of photography, Dr. Ozluturk developed a number of patented inventions that enable a digital camera to produce higher-quality photos and videos. Dr. Ozluturk invented a way for a digital camera or video camera to remove (or add) blur from photos and video by combining multiple consecutive images obtained through the device's image sensor. This method was possible, but not practical, at the time because cameras did not either (1) contain sufficient memory to hold multiple images or (2) have the processing power to correct these images in the manner taught by Dr. Ozluturk's patents.

Beginning in February 2013, Dr. Ozluturk began corresponding with Samsung about his digital camera patents, which Dr. Ozluturk believed could benefit Samsung. Nevertheless, the discussions with Samsung never came to

fruition, and Dr. Ozluturk was forced to file the co-pending lawsuit in the Eastern District of Texas because the functionality described and claimed in the '450 and related patents has appeared in Samsung products.

III. APPLIED REFERENCES

Samsung presents what it describes as “two” Grounds based on the various combinations of Allen (SAMSUNG-1005), Akifumi (SAMSUNG-1007), Creative Camcorder (SAMSUNG-1008), Balmer (SAMSUNG-1006), and Gal (SAMSUNG-1004). Petition, 1.

Ground		Basis	References	Challenged Claims
“1”	1(A)	§§ 102 or 103	Allen (or Allen and Akifumi)	1-12, 14-25, 27-31
	1(B)	§ 103	Allen (or Allen and Akifumi) and Creative Camcorder	13, 26, 32
	1(C)	§ 103	Allen (or Allen and Akifumi) and Balmer	27
“2”	2(A)	§§ 102 or 103	Gal (or Gal and Akifumi)	1-12, 14-25, 27-31
	2(B)	§ 103	Gal (or Gal and Akifumi) and Creative Camcorder	13, 26, 32
	2(C)	§ 103	Gal (or Gal and Akifumi) and Balmer	27

As seen in the table below, Samsung is actually asserting twelve grounds rather than two.

Ground		Basis	References	Challenged Claims
“1”	1	§ 102	Allen	1-12, 14-25, 27-31
	2	§ 103	Allen and Creative Camcorder	13, 26, 32
	3	§ 103	Allen and Balmer	27
	4	§ 103	Allen and Akifumi	1-12, 14-25, 27-31
	5	§ 103	Allen and Akifumi and Creative Camcorder	13, 26, 32
	6	§ 103	Allen and Akifumi and Balmer	27
“2”	7	§ 102	Gal	1-12, 14-25, 27-31
	8	§ 103	Gal and Creative Camcorder	13, 26, 32
	9	§ 103	Gal and Balmer	27
	10	§ 103	Gal and Akifumi	1-12, 14-25, 27-31
	11	§ 103	Gals and Akifumi and Creative Camcorder	13, 26, 32
	12	§ 103	Gal and Akifumi and Balmer	27

However, because neither Allen nor Gal can anticipate any of the claims of the ’450 patent (as admitted by Samsung in its Petition), there are actually six Grounds to be considered by the Board (highlighted in green). None of these Grounds creates a substantial likelihood that one or more of the Challenged Claims is unpatentable.

A. Allen—the primary reference applied in Ground 1—does not disclose the claimed invention.

Allen discloses a sensor driven global motion compensation system that is intended to compensate for jitter arising from camera movements during video recordings. SAMSUNG-1005, Abstract. Figure 3A of the Allen patent shows an embodiment of the invention in which a camera captures video frame data and passes that data to a motion compensator (44).

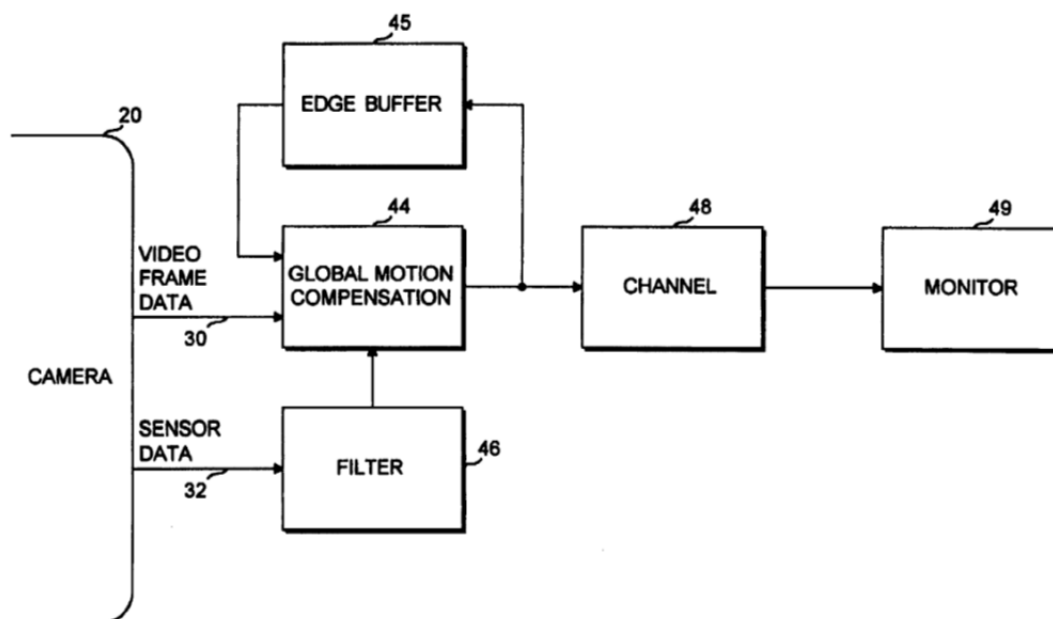


FIG. 3A

SAMSUNG-1005, Figure 3A. Sensor data is likewise passed to the motion compensator 44, “which operates according to conventional motion compensation techniques” known in the art. *Id.*, 5:27-37. Accordingly, Allen is not directed to a novel motion compensation technique. Moreover, the prior art motion

compensation techniques cited in Allen relate to compensation for camera zoom and pan, *which Allen disclaims based on clear statements in the patent specification*. SAMSUNG-1005, 5:27-62 (citing EX-2013, which explicitly relates to zoom/pan compensation). Nevertheless, Allen purports to be a system that takes video from a video camera, uses the sensor data to cancel out jitter caused by high frequency movements of the camera, and then outputs the modified video to a monitor (as shown in Figure 3A), a satellite link, a telephone line, or to a storage medium. SAMSUNG-1005, 5:53-62; 6:14-40.

The camera 20 in Allen is shown in Figure 2, reproduced below.

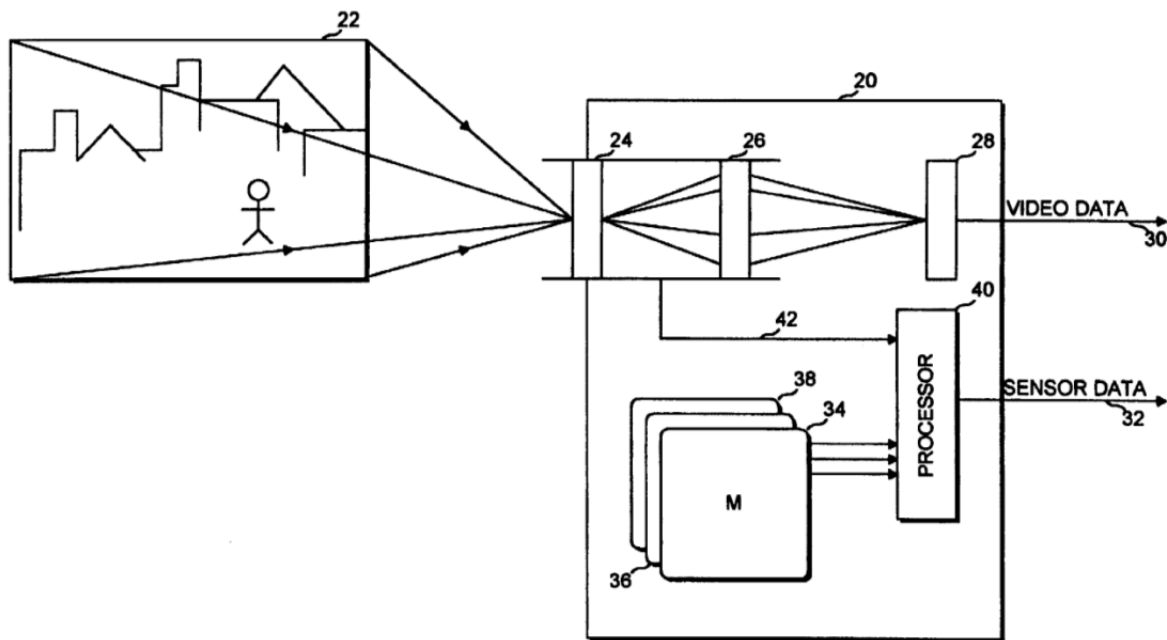


FIG. 2

The specification of the Allen patent describes the camera assembly.

FIG. 2 is a block diagram illustrating one embodiment of a video camera according to the present invention. As with a prior art video camera, a camera 20 records a physical scene 22, using a fixed lens 24 and a zoom lens 26 to focus light onto a charge coupled device 28, to produce a continuous stream of frames on video data bus 30. However, an additional data stream, on sensor data bus 32, is also provided. Motion detectors 34, 36, and 38 indicate to a processor 40 the movement of camera 20 in each of the three axial directions.

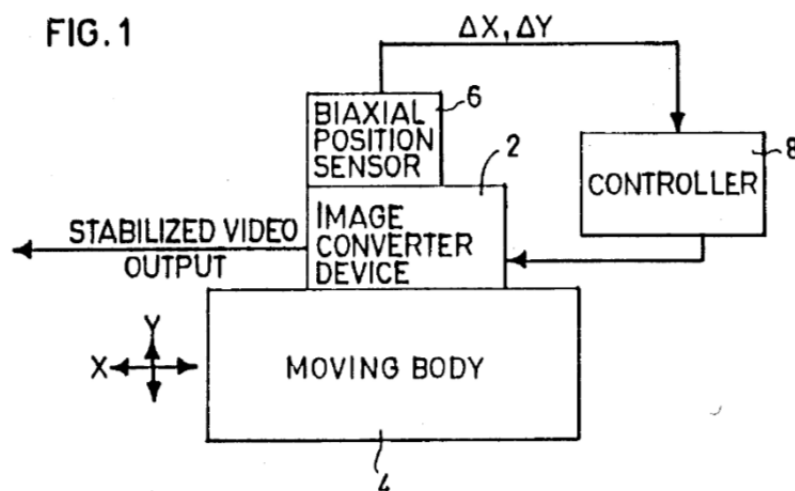
SAMSUNG-1005, 4:59-68. Allen notes that the “[p]rocessor 40 does not need to perform complex computations, but instead merely records, and in some embodiments digitizes, the sensor and zoom data and provides it as a data stream on sensor data bus 32.” *Id.*, 5:8-14. As shown in Figure 3A, any motion compensation performed in connection with the invention is performed off-device in a separate, stand-alone device. That is, the motion compensator 44 is in a separate and distinct, stand-alone device from the camera 20 (and the camera processor 40) and merely operates on the video data and sensor data passed to it by the camera. Moreover, it is clear from the specification that no video at all—much less motion corrected video—is stored on the camera. Allen therefore describes correcting high frequency jitter caused by movement of the camera during

recording, but fails to disclose a single embodiment or instance of blur correction or video correction using multiple, sequential video frames.

As will be discussed in more detail below, because Allen fails to disclose “an imaging device” that detects and corrects motion and stores the final, corrected video, Allen cannot anticipate any of the Challenged Claims. This point is clearly conceded in the Petition. Petition,15 (recognizing that Allen discloses only “the combination of image capture device and post-processing system”).

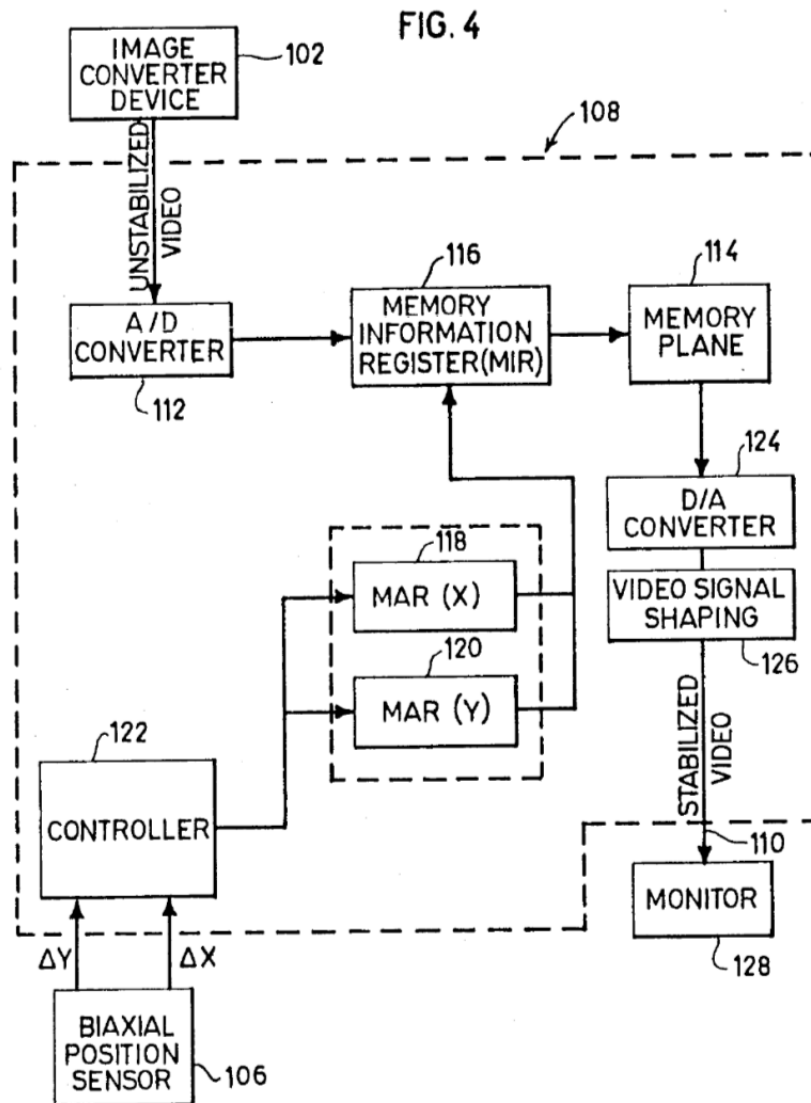
B. Gal—the primary reference applied in Ground 2—likewise fails to disclose the claimed invention.

Gal discloses a “position-stabilized image converter system” that includes an image sensor, a change-in-position sensor to detect movement of the image sensor, and a control circuit capable of “shifting the electrical signals” in order to compensate for movement of the image sensor when recording. SAMSUNG-1004, Abstract. One embodiment of Gal is shown in Figure 1, reproduced below.



SAMSUNG-1004, Figure 1. Here a biaxial position sensor is physically coupled to an image converter device 2, which can include an area image sensor in the form of a charge-coupled device (“CCD”) that stores light intensity packets in a memory information register (MIR). SAMSUNG-1004, 2:62-3:30. The position sensor transmits motion information “to controller 8 which, as mentioned earlier, shifts the electrical signals produced by the light sensing elements 12 according to the change-in-position signal ΔX , ΔY , to compensate for these changes in position and thereby to position-stabilize the electrical output 19.” SAMSUNG-1004, 3:41-50.

However, to the extent the light intensity recorded by the CCD is stored in the aforementioned MIR, the change-in-position signal is not. Moreover, the final stabilized video output is likewise not stored in on-camera memory. In fact, Gal never mentions combining modified images (*e.g.*, combining sequential images) to correct for motion, blur, or distortion and form a final video. This is further evident from Figure 4 of Gal, which is reproduced below.



SAMSUNG-1004, Figure 4. As shown in Figure 4, image data captured by the image converter device 102 and motion information captured by the biaxial position sensor 106 are both fed into an external computer 108. The positional displacement information is used to set the “presettable counters” of Memory-Address-Register-X (MAR-X) and Memory-Address-Register-Y (MAR-Y). *Id.*, 4:50-66. Image data from the MIR and positional information from MAR-X and

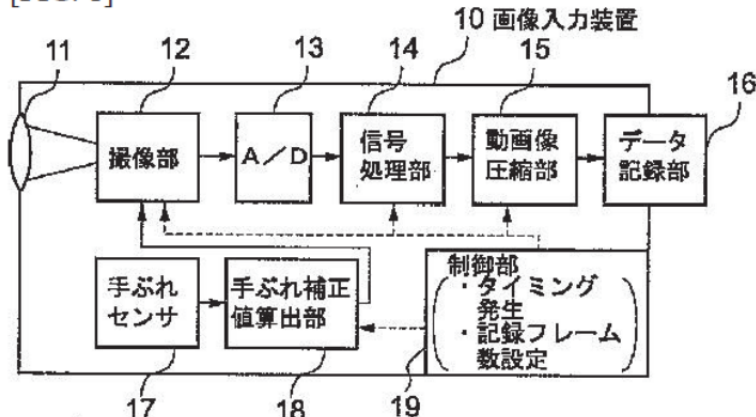
MAR-Y are combined in the memory plane 114 “to compensate for the positional displacements sensed by sensor 106.” *Id.* Moreover, the position-stabilized video is transmitted out of the computer. SAMSUNG-1004, 5:5-7. Samsung does not provide a theory how a “final video” is stored in memory on an “imaging device.”

Accordingly, Gal discloses another system in which any processing of stabilized video occurs off-device. Samsung admits as much in the body of the Petition. Petition, 67. The background of the ’450 patent discusses these types of “post-processing” systems and their disadvantages when presenting the novel inventions recited in the Challenged Claims.

C. Akifumi—a secondary reference—does not compensate for the deficiencies of Allen and Gal and is not related to the claimed invention.

Akifumi discloses an “image inputting device” as shown in Figure 1.

[FIG. 1]



- 10: Image Inputting Device
- 12: Imaging Portion
- 13: A/D Converter
- 14: Signal Processing Portion
- 15: Video Compressing Portion
- 16: Data Recording Portion
- 17: Shaking Sensor
- 18: Shaking Correction Value Calculating Portion
- 19: Controlling Portion
 - ・ Timing Generator
 - ・ Recording Frame Number Setting

SAMSUNG-1007, Figure 1. The image inputting device includes a camera (imaging portion 12) and a shaking sensor 17. Images captured by the camera are stored in memory (the data recording portion 16). However, Akifumi discloses that the shaking correction value applied to the recorded video is based on the frame rate of the recording itself. SAMSUNG-1007, [0039]-[0040].

Here, the shaking correction value is applied to the recorded image frame only when that frame is received from the imaging portion. *Id.*, [0046]. Once the shaking correction value has been applied, the image is passed through the A/D converter 13, the signal processing portion 14, and the video compressing portion

15 before being stored in the data recording portion 16. *Id.*, Figure 1. Accordingly, while the corrected image is stored in memory, Samsung does not show the storing of a sequence of unmodified images that are subsequently corrected based at least in part on motion information. At best, Samsung points to disclosure showing a shaking correction value is applied *before* any images are ever captured. SAMSUNG-1007, Figure 1.

Accordingly, Akifumi discloses an invention that is substantively different from Allen, Gal, and the '450 patent. Moreover, Akifumi has a substantively different structure from both primary references, and a POSITA would not be motivated to combine either Allen or Gal with Akifumi absent the road map provided by the specification of the '450 patent.

D. Creative Camcorder—a tertiary reference—does not compensate for the failures of Allen, Gal, and Akifumi.

Samsung relies on Creative Camcorder for its alleged disclosure of a “user-interface” that enables a user to modify images in connection with its challenges to Claims 13, 26, and 32 of the '450 patent. Specifically, Creative Camcorder discloses a “FlexiZone” feature that enables a user to select a zone of an image seen through a viewfinder on which the user wants to focus. This functionality is described in four paragraphs of the magazine article cited by Samsung. SAMSUNG-1008, 10. However, the functionality described in Creative Camcorder

has no relationship to “modifying one or more images of the sequential images” or “combining the modified images to obtain a final video” based on the user input. SAMSUNG-1001, Claim 13.

Creative Camcorder also discloses a substantively different system than what is disclosed in Allen or Akifumi. For example, the image stabilization system disclosed in Creative Camcorder operates to correct an image *before the image is captured and recorded by the CCD*. In Creative Camcorder, a prism is positioned adjacent to the CCD. Motion information captured by the motion sensors is fed to prism actuators that adjust the image captured by the CCD. This is not analogous to the systems disclosed in Allen and Akifumi in which motion information is used to adjust images after they are captured by the CCD or imager.

E. Balmer—a tertiary reference—only discloses a system with multiple processors.

Samsung relies on Balmer solely for its disclosure of a system having multiple processors in an effort to challenge Claim 27 of the '450 patent. However, there is simply no disclosure in Allen, Gal, or Akifumi that supports on-camera synchronous storage of motion data or on-camera storage of a final, motion corrected video—much less disclosure of a multiprocessor system to perform these functions. Samsung is again using the '450 patent as a road map and references

like Balmer to fill in the holes of its hindsight reconstruction of the Challenged Claims.

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION UNDER 35 U.S.C. § 314 TO DENY INSTITUTION

A. Denial under § 314(a) would prevent inefficient use of the Board's limited resources.

The Board should exercise its discretion under 35 U.S.C. §314(a) and 37 C.F.R. § 42.108(a) to deny all of Samsung's petitions. The Board is never required to institute review; it always has discretion whether to grant an IPR petition. *See* 35 U.S.C. § 314(a). One instance in which the Board regularly exercises its discretion to deny institution is when doing so likely would result in efficiency, duplication of efforts, and potentially inconsistent result, due to ongoing parallel proceedings in another forum, such as district court. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020). In *Fintiv*, the Board laid out six factors to balance in deciding whether to exercise its discretion to deny institution in light of a co-pending parallel proceeding:

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 the 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.

Id. at 5-6. “[I]n evaluating the factors, the Board takes a holistic view of whether efficiency and the integrity of the system are best served by denying or instituting review.” *Id.* at 6.

Here, each of these *Fintiv* factors weighs in favor of denying review. The same parties have been litigating the same patents in district court for over a year, and Samsung relies on much of the same prior art in its petition as it does in the district court. Moreover, the district court trial will precede any final written decision from the Board by approximately 10 months. To avoid duplication of efforts, wasting resources, and potentially inconsistent decisions, the Board should deny institution.

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

The first *Fintiv* factor considers whether the district court has granted a stay or evidence exists that one may be granted. All evidence here indicates that there is little or no chance that the district court will stay those proceedings.

The district court has not yet entered an order on Samsung's motion to stay pending IPR proceedings, but will likely deny the motion without prejudice to re-urging it if the Board institutes an IPR. However, the district court is unlikely to grant a stay even if the PTAB were to institute review and Samsung were to renew its motion to stay. The Eastern District of Texas, and Judge Gilstrap in particular, heavily disfavors stays pending IPRs. According to a 2017 Report, courts in the Eastern District of Texas granted only 32% of opposed motions to stay pending PTAB action, with Judge Gilstrap granting only 28% of such motions. EX-2003 at 31. In fact, Judge Gilstrap has repeatedly denied motions to stay district court proceedings pending even an instituted IPR where, as here, the stay would come late in the case. *St. Lawrence Commc'ns LLC, v. ZTE Corp.*, 2017 U.S. Dist. LEXIS 84290, at *8-11 (E.D. Tex. Jan. 17, 2017); *Intellectual Ventures I LLC v. T-Mobile USA, Inc.*, 2:17-CV-00577-JRG, Dkt. 255 (E.D. Tex. Dec. 13, 2018);

Intellectual Ventures II LLC v. FedEx Corp., 2017 U.S. Dist. LEXIS 176813 (E.D. Tex. Oct. 24, 2017).¹

A stay would be particularly unlikely in this case. “District courts typically consider three factors when determining whether to grant a stay pending *inter partes* review of a patent in suit: (1) whether the stay will unduly prejudice the nonmoving party, (2) whether the proceedings before the court have reached an advanced stage, including whether discovery is complete and a trial date has been set, and (3) whether the stay will likely result in simplifying the case before the court.” *Solas OLED Ltd. v. Samsung Display Co., Ltd.*, No. 2:19-cv-00152-JRG,

¹ “[A] court’s general practices on requests for stays may be relevant in some circumstances.” *Supercell Oy v. Gree, Inc.*, IPR2020-00310, Paper 13 at 10 (PTAB June 18, 2020). The PTAB previously has “decline[d] to speculate on an undeveloped record” where the parties did not “provide[] any evidence or analysis . . . concerning the court’s practices, including the circumstances under which the district court is more or less likely to grant a stay, and how those practices relate to the facts” of the case at hand. *Id.* The analysis in the text above, however, provides what was lacking in previous cases, and specifically analogizes to recent cases with similar facts in which the Eastern District of Texas has denied a stay.

2020 WL 4040716, at *1 (E.D. Tex. July 17, 2020) (quoting *NFC Techs. LLC v. HTC AM., Inc.*, No. 2:13-cv-1058-WCB, 2015 WL 106911, at *2 (E.D. Tex. Mar. 11, 2015)). Each factor weighs against a stay.

First, a stay—especially a stay granted only after institution—would prejudice Clear Imaging. Judge Gilstrap’s recent decision in *Solas OLED* is instructive. Judge Gilstrap held that the first factor “weigh[ed] heavily against granting a stay” where the patent owner had “already incurred the majority of the expenses associated with th[e] litigation,” and trial was “only a few months away.” 2020 WL 4040716, at *2. Similarly here, if the PTAB issues its institution decision in February 2021, the district court proceeding will be at a similarly “advanced stage of litigation” as was the case in *Solas OLED*. As explained in more detail below, by the deadline for the PTAB’s institution decision—the soonest the district court would potentially reconsider its denial of the motion to stay—discovery will have been closed for months, and the parties will have filed and responded to dispositive motions and *Daubert* motions. EX-2004. As in *Solas OLED*, “with fact and expert discovery completed, [Clear Imaging will have] already incurred the majority of the expenses associated with th[e] litigation.” 2020 WL 4040716, at *2. Thus, the district court is likely to find in this case, as it did in *Solas OLED*, that “this factor weighs heavily against a stay at this advanced stage of litigation.” *Id.*; see also *Oyster Optics, LLC v. Infinera Corp.*, No. 2:19-cv-

00257-JRG, Dkt. 87 (E.D. Tex. July 17, 2020) (denying re-urged motion to stay after IPR institution, and finding the first factor “weighs heavily against granting a stay” in part because “the case is already at a late stage”).

Second, by the time the district court reconsiders any renewed motion to stay, discovery will be complete, and trial will be imminent. Again, *Solas OLED* is instructive. Judge Gilstrap found that the case was at an “extremely advanced stage” because the court already had issued a claim construction order, all discovery had closed, and the deadline to file *Daubert* motions and dispositive motions was four days prior to the order denying the motion to stay. 2020 WL 4040716, at *2. By February 2021, the deadline for the PTAB’s institution decision, the district court case will be even more advanced than was the district court litigation in *Solas OLED*. The court issued a claim construction order on October 30, 2020, fact discovery will have been closed for three months, expert discovery will have been closed for over a month, and the parties will have filed *and responded to* dispositive motions and *Daubert* motions nearly a month earlier. EX-2004.

In fact, Judge Gilstrap has found that the second factor weighs against granting a stay where the case is even less advanced than the district court litigation in this case will be at the time of the PTAB’s institution decision. In *Oyster Optics*, for example, Judge Gilstrap denied a re-urged motion to stay after

the PTAB instituted review of the asserted patent. In doing so, he found that the second factor weighed against granting a stay even where claim construction briefing and argument was complete, but fact discovery was still open and trial was six months away. The arguments against a stay in this case will be even more compelling, where all discovery will have been closed for over a month, and trial will be less than two months away. EX-2004. As in *Solas OLED* and *Oyster Optics*, the court is likely to find that the second factor weighs against granting a stay.

Finally, the court is likely to find that even an instituted IPR probably will not significantly simplify the case.² First, the Eastern District of Texas recently has said that after *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348 (2018), “institution decisions may not be as useful as they were in the past for providing an indication of whether all claims would be found unpatentable,” and therefore whether the

² Even if the court were to find that an instituted IPR was likely to simplify the case and therefore weighed in favor of a stay, Judge Gilstrap held in *Solas OLED* that this factor did not outweigh the first two factors counseling against granting a stay. 2020 WL 4040716, at *3. Judge Gilstrap would be likely to do the same here.

PTAB's Final Written Decision is likely to simplify the case. *Arbor Global Strategies LLC v. Samsung Elec. Co., Ltd.*, C.A. No. 2:19-cv-333, Dkt. 56, 6 (E.D. Tex. Aug. 10, 2020). In other words, the district court is unlikely to interpret an institution decision as meaning it is likely that all claims asserted in the district court litigation are likely to be found invalid. Instead, Samsung "may need to show that the Board is likely to invalidate every asserted claim—a showing that may require more than just pointing to a successful petition." *Id.*; *Peloton Interactive, Inc. v. Flywheel Sports, Inc.*, 2019 WL 3826051, at *2 (E.D. Tex. Aug. 14, 2019). ("[T]he Court still concludes that an institution decision is less effective as a barometer for the issue of whether the PTAB will eventually determine that the challenged claims are unpatentable after *SAS*.").

Samsung's burden is likely to be particularly high, because Clear Imaging is asserting six patents in the district court litigation. EX-2001. "Courts in [the Eastern District of Texas] have often concluded that the simplification factor weighed against a stay where the PTAB had not instituted IPR proceedings for all asserted patents." *Peloton*, 2019 WL 3826051, at *2. So unless the PTAB institutes IPRs on all six of the patents, at least part of the district court case will have to be tried, so the district court will be unlikely to stay the case. *See Cellular Commc'ns Equip. LLC v. HTC Corp.*, No. 6:16-cv-475-KNM, 2018 WL 4261194,

at *3 (E.D. Tex. May 8, 2018) (“Since IPR has been instituted on only two of the three patents-in-suit, this factor weighs against a stay;” collecting similar cases).

Furthermore, the district court is unlikely to find that even an instituted IPR is likely to simplify the case because Samsung is asserting invalidity theories broader than those presented in the IPR petitions. Judge Gilstrap’s opinion in *Peloton* is informative. There, the petitioner/infringer was “assert[ing] invalidity theories under 35 U.S.C. §§ 101, 102, 103, 112(1), and 112(2), suggesting that a stay would not significantly simplify the issues.” 2019 WL 3826051, at *3. If the PTAB concluded that some challenged claims were not unpatentable, the petitioner/infringer intended to pursue other invalidity theories at trial, including theories under §§ 101, 112, and 102 and 103 prior art that did not consist of patents and printed publications. As a result, Judge Gilstrap found that the third stay factor weighed against granting a stay, because “any stay would not result in significant simplification of the case.” *Id.* Similarly here, in Samsung’s invalidity contentions, it identified 35 U.S.C. §§ 101 and 112 as asserted grounds for invalidity of each of the asserted patents. EX-2006 at 22, 49, 77, 112, 140, 165. It also identified several pieces of alleged prior art that are not patents or printed publications. EX-2006 at 109. Samsung has never disclaimed those invalidity theories, so if its IPRs are

unsuccessful, it likely intends to pursue them at trial.³ In that case, the PTAB proceedings will not have significantly simplified the trial, as Judge Gilstrap found in *Peloton*.

Samsung cannot even argue that a stay of district court proceedings is likely. Rather, the most that it says is that institution will “enable” a stay. But the cases it cites for that proposition are inapposite. In *Uniloc USA, Inc. v. Samsung Electronics America, Inc.*, “the patent claims ha[d] not yet been construed by the Court, and discovery [was] not yet complete.” Case No. 2:16-cv-642-JRG, Dkt. 268, at 2 (E.D. Tex. June 13, 2017). Here, by contrast, the district court case will be far more advanced by the time the district court considers any stay. In *NFC Technologies LLC v. HTC America, Inc.*, the patent owner did not make a specific

³ This factor makes this case unlike others in which courts have held that the district court litigation will be simplified even if the PTAB does not invalidate the patents, because at least the petitioner will be estopped from presenting invalidity theories. Estoppel would not prevent Samsung from asserting invalidity theories that could not reasonably have been raised during the IPR, such as § 101 challenges, §§ 102 or 103 challenges not based on patents or printed publications, or § 112 challenges. *See* 35 U.S.C. § 315(e).

showing of prejudice, discovery was still open at the time of the stay, “significant pretrial discovery, filings, motions, and other events” remained outstanding, and trial was six months away, making it unlike this case. No. 2:13-cv-1058, 2015 WL 106911, at *3 (E.D. Tex. 2015). Additionally, that opinion preceded *SAS* and was not decided by Judge Gilstrap, making it less relevant to the likelihood of Judge Gilstrap granting a stay in this case. EX-2002 at 30 (examining stay decisions from different judges and concluding that “the judge may matter more than the jurisdiction”); EX-2003 at 27 (same).

In short, based on the Eastern District of Texas’s general reluctance to stay trials pending IPR proceedings, and in particular Judge Gilstrap’s opinions in *Solas OLED*, *Oyster Optics*, and *Peloton*, it is unlikely that the district court will grant a stay pending an IPR. Thus, the first *Fintiv* factor weighs against institution.

C. Proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision.

The second *Fintiv* factor is the proximity of the trial date to the Board’s projected deadline to issue a Final Written Decision. “If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under NHK.” *Fintiv*, IPR2020-00019, Paper 11 at 9. Here, trial is set for April 5, 2021. EX-2004. The statutory deadline for the Board to issue a Final Written Decision would not be

until late February 2022, over 10 months after trial in the district court. The Board has repeatedly found that even shorter lengths of time between the trial date and the statutory deadline favor denying institution. *See, e.g., Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, IPR2020-00122, Paper 15 at 7-8 (PTAB May 15, 2020) (6 months); *Intel Corp. v. VLSI Tech. LLC*, IPR2020-00141, Paper 16 at 9-11 (PTAB June 4, 2020) (6-7 months); *Apple Inc. v. Maxell, Ltd.*, IPR2020-00203, Paper 12 at 9-10 (PTAB July 6, 2020) (8 months); *Google LLC v. Personalized Media Commc'ns, LLC*, IPR2020-00720, Paper 16 at 6-7 (PTAB Aug. 31, 2020) (10 months).

Petitioner argues that COVID-19 may delay the trial date, but as the PTAB has said in the past, the Board “generally take[s] courts’ trial schedules at face value absent some strong evidence to the contrary.” *Fintiv*, IPR2020-00019, Paper 15 at 13. With respect to COVID-19 specifically, the Board has “decline[d] to speculate whether [a trial] date will change due to COVID-19 disruptions.” *Personalized Media*, IPR2020-00720, Paper 16 at 6. That is particularly true given that the Eastern District of Texas has held at least one jury trial in the midst of

COVID, and plans to hold several more between now and April 2021.⁴ *Optis Wireless Tech., LLC v. Apple Inc.*, 2:19-cv-00066 (E.D. Tex.) (docket showing jury trial held August 3-11, 2020); *Gree, Inc. v. Supercell Oy*, No. 2:19-cv-00070 (E.D. Tex.) (docket showing jury trial held September 10-18, 2020). Moreover, even if the trial were delayed, it is extraordinarily unlikely that it would be delayed by over *10 months*, the amount of delay necessary for the trial to occur after the Board's Final Written Decision. In other words, "even a delayed trial may precede a final written decision in this proceeding." *Maxell*, IPR2020-00203, Paper 12 at 10. Just as in other cases in which petitioners have made a similar argument, this factor weighs in favor of denying institution. *See, e.g., Personalized Media*, IPR2020-00720, Paper 16 at 6-7; *Maxell*, IPR2020-00203, Paper 12 at 10.

Samsung also argues that given the speed of the docket in the Eastern District of Texas, trial would have preceded a Final Written Decision even if Samsung had filed its petitions earlier. As this Board has acknowledged, however, "[w]hen sued in a fast-moving district, this factor may often weigh toward denial,

⁴ Notably, while the parties in the district court proceedings have agreed to minor modifications of interim deadlines in the procedural schedule, the trial date has never changed. *Compare* EX-2005 (DKT. 36), *with* EX-2004 (DKT. 99).

even if a petitioner files its petition very quickly.” *NanoCollect Biomed., Inc. v. Cytonome/ST, LLC*, IPR2020-00551, Paper 19 at 16 (PTAB Aug. 27, 2020). In fact, in *Supercell Oy v. Gree, Inc.*, the Board rejected an argument similar to the one Samsung is making here. In that case, the petitioner had filed its IPR petition five months before the statutory deadline and only seven months after the patent issued. IPR2020-00310, Paper 13 at 13 (PTAB June 18, 2020). While the Board was “cognizant that Petitioner promptly filed the Petition,” it nevertheless denied institution. *Id.* The facts here weigh even more heavily in favor of denying institution than they did in *Supercell*. Samsung did not file its Petition until nearly 10 months after being served with the district court complaint, nearly 7 months after receiving Clear Imaging’s infringement contentions, and over 4 months after serving its invalidity contentions relying on much of the same prior art as the Petition.

Finally, Samsung’s arguments do not change the fact that a district court trial is likely to occur months before any Final Written Decision, virtually ensuring duplication of effort, wasted resources, and potentially inconsistent decisions. Thus, this factor weighs in favor of denying institution.

D. Investment in the parallel proceeding by the court and the parties.

The third factor is “investment in the parallel proceeding by the court and the parties.” *Fintiv*, IPR2020-00019, Paper 11 at 6. “[I]f, at the time of the

institution decision, the district court has issued substantive orders related to the patent at issue in the petition, this fact favors denial.” *Id.* at 9-10. Specifically, “district court claim construction orders may indicate that the court and parties have invested sufficient time in the parallel proceeding to favor denial.” *Id.* at 10.

Here, the parties and the district court have made significant investments in the district court proceeding, and they will have done even more by the time the Board issues its institution decision. As of the date of this response, the parties completed claim construction briefing on 52 terms across 6 patents, including supporting expert declarations, and the court held a hearing and issued a claim construction order. The parties exchanged hundreds of pages of infringement and invalidity contentions months ago (January and April 2020, respectively). EX-2005. The parties recently completed fact discovery (November 16, 2020). In doing so, the parties collectively produced 134,886 documents, totaling 1,195,044 pages, and conducted 18 depositions. Opening expert reports are substantially complete, as they are due only days after this response (on November 25, 2020).

By the deadline for the Board’s institution decision in late February 2021, the parties and the court will have invested even more resources. Expert rebuttal reports are due on December 21, 2020. The deadline to complete expert discovery is January 8, 2021. The deadline to file dispositive motions and *Daubert* motions is January 12, 2021. Responses to those motions are due January 26, 2021. On

February 4, 2021, the party with the burden of proof will serve pretrial disclosures, and on February 18, 2021, the opposing party will serve objections and rebuttal pretrial disclosures. The parties will also file motions in limine on February 18, 2021. The only remaining deadlines—related to pretrial disclosures and filings—are only days after the Board’s deadline to issue an institution decision. Practically the only thing left to do in district court will be trial.

The Board has held that this factor weighs in favor of denying institution in similar cases. *Ethicon, Inc. v. Bd. of Regents*, IPR2019-00406, Paper 27 at 11 (PTAB June 10, 2020) (fact and expert discovery complete, claim construction briefed and order issued, dispositive motions filed, motions to exclude and motions in limine fully briefed); *Kranos Corp. v. Apalone, Inc.*, IPR2020-00501, Paper 13 at 11-12 (PTAB July 16, 2020) (“[T]he only remaining due dates are for the final pre-trial conference . . . and motions in limine”); *Maxell*, IPR2020-00203, Paper 12 at 11-12 (discovery closed, so this factor favors denial “to prevent duplication of work on similar issues by the Board and the district court”). In fact, the Board has held that this factor weighs in favor of denying institution even where far fewer resources had been invested. *Fintiv*, IPR2020-00019, Paper 15 at 15-16 (claim construction complete and contentions exchanged, but discovery ongoing); *Cisco*, IPR2020-00122, Paper 15 at 8-9 (contentions exchanged, claim construction briefed, but expert discovery open for two more months); *VLSI Tech.*,

IPR2020-00141, Paper 16 at 12 (contentions exchanged and claim construction order issued). As in *Kranos*, “[i]n view of the parties’ completion of contentions, discovery, and dispositive motions in the related district court litigation, the parties have made a substantial investment in the parallel proceeding.” IPR2020-00501, Paper 13 at 12. This factor weighs against institution.

Samsung cannot seriously contest that the parties and the district court will have invested a significant amount of time and resources in the district court by the time the Board makes an institution decision. So instead, it argues the Board should weigh Samsung’s investment in IPR proceedings against investment in the district court.⁵

⁵ Samsung also blames Clear Imaging for asserting infringement of too many claims and allegedly “refusing to narrow the case until after Samsung’s IPR bar date.” Clear Imaging has no desire to engage in a mud-slinging contest. Suffice it to say that Clear Imaging disagrees with Samsung’s characterization. As shown in the email thread attached to the Petition, Clear Imaging was unable to narrow its claims earlier because Samsung delayed production of its source code and refused to produce technical documents, a failure that resulted in a motion to compel. Petition, 5; EX-2007 (DKT. 57) (public, redacted motion to compel technical

That argument is irrelevant. The third *Fintiv* factor is “investment *in the parallel proceeding* by the court and the parties.” *Fintiv*, IPR2020-00019, Paper 11 at 6 (emphasis added). That factor says nothing about investment in IPR proceedings. Even if it were proper to consider investment in IPR proceedings, Samsung provides no evidence that its alleged “investment” in preparing its IPR petitions is anything beyond what every petitioner could claim. That cannot be enough for this factor to weigh in favor of institution. Samsung emphasizes the number of petitions it has filed, but if that were enough to tip the balance, it would offer perverse incentives for petitioners to file duplicative (and baseless) petitions.

In any event, there is no serious dispute that by the time of the Board’s initial decision, the parties will have invested significantly more resources in the district court litigation than in the IPR proceedings. Institution would result in

production); *see In re Katz*, 639 F.3d 1303, 1313 n.9 (Fed. Cir. 2011) (“[A] claim selection order could come too early in the discovery process, denying the plaintiff the opportunity to determine whether particular claims might raise separate issues of infringement or invalidity.”). The parties eventually jointly moved for a claim reduction order, the Court entered such an order, and Clear Imaging complied with it. EX-2008.

those resources going to waste, duplication of that effort in the IPR proceedings as the parties retread old ground, or both. If the Board weighs investment in district court proceedings against investment in IPR proceedings, there is no contest: the district court and the parties have invested much more in the district court proceeding. This factor weighs in favor of denying institution.

E. Overlap between issues raised in the petition and in the parallel proceeding.

The fourth *Fintiv* factor is the amount of overlap between issues raised in the petition and in the parallel proceeding. Samsung does not dispute that it asserts some of the same prior art in both the IPR and district court, but submits a stipulation that it contends “eliminate[s] any risk of duplicated effort” due to overlap. Its stipulation is so narrow, however, that it means nothing. Samsung stipulates that it “will not pursue within [the district court proceeding] 2:19-CV-0326-JRG, invalidity . . . on any ground that is instituted.” SAMSUNG-1022. It then lists the specific grounds asserted in the IPRs, and clarifies that it applies only to the “exact same grounds.” *Id.*

The stipulation has little to no practical effect. First, the stipulation is extraordinarily narrow. Samsung agrees to withdraw only the *identical* grounds asserted in both the district court and an instituted IPR. The Board has given little weight to such stipulations in the past. “[A] broader stipulation that Petitioner

would not ‘pursue any ground raised or that could have been reasonably raised in an IPR’ might have better addressed these concerns in a much more substantial way.” *Personalized Media*, IPR2020-00720, Paper 16 at 8-9 (finding that a similarly narrow stipulation caused this factor to weigh only “marginally” against denying institution). The narrowness of Samsung’s proposed stipulation is particularly farcical in this case, where Samsung is asserting 137 possible obviousness combinations in the district court. While it cloaks the offered stipulation as a concession, a stipulation to withdraw only a handful of combinations out of the 137 asserted is no concession at all.

Second, Samsung is wrong to claim that its stipulation “eliminate[s] any risk of duplicated effort.” That assertion ignores that by the time the Board issues its institution decision, most of the effort involved with each invalidity ground in the district court will already have been expended. Expert reports will have been written, discovery will have closed, and any *Daubert* motions and motions for summary judgment will have been filed. *See supra*. The only effect of an institution decision would be to have the parties redo that same work in IPR proceedings.

Finally, Samsung’s proposed stipulation would not actually remove the problematic overlap. Even if the Board instituted an IPR and Samsung withdrew the specific instituted combinations, Samsung would still be asserting the same

pieces of prior art in different combinations in the district court. In fact, in its stipulation letter, Samsung specifically “reserves its rights to continue to assert all other grounds, including any *comprised of references included* in the above-listed grounds.” SAMSUNG-1022 (emphasis added). As a result, both the Board and the district court would be analyzing and interpreting the same pieces of prior art, duplicating effort and potentially reaching inconsistent results. *Maxell*, IPR2020-00203, Paper 12 at 14 (“[A]lthough the obviousness ground asserted here is not identical to either ground in Petitioner’s final invalidity contentions, . . . the assertion of Waldroup and Nakayama in both proceedings may result in duplication of work and create the potential for inconsistent decisions.”).

For example, if the Board instituted this IPR, Samsung would withdraw Allen or Allen and Akifumi, and Gal, or Gal and Akifumi. However, Samsung could still assert Coleman, Sekine, or Hwang (or a slew of other references) with Gal, Allen, or Akifumi.

F. Whether the petitioner and the defendant in the parallel proceeding are the same party.

The parties in the district court action and this case are the same. Consequently, this factor entirely favors denying institution. *Fintiv*, IPR2020-00019, Paper 15 at 15 (“Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary

denial.”). Samsung argues that the Petition “is potentially helpful to future defendants,” but it cites no case in which the Board has found that argument relevant to its analysis. Moreover, Samsung’s concern that Clear Imaging “might otherwise later assert” its patents against unidentified “others” is entirely speculative and therefore deserves no weight. This factor weighs against institution.

G. Other circumstances that impact the Board’s exercise of discretion, including the merits.

Finally, the Board considers other circumstances that affect the Board’s discretion. The most commonly considered circumstance counseling against institution is the petition’s weakness on the merits. *E-One Inc. v. Oshkosh Corp.*, IPR2019-00162, Paper 16 at 13-20 (June 5, 2019). As explained in more detail below, the merits of this Petition are weak. Samsung does nothing more than “use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—*i.e.*, the impermissible *ex post* reasoning and hindsight bias that *KSR* warned against.” *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019).

V. CLAIM CONSTRUCTION IS NOT NEEDED TO DISPOSE OF THE PETITION

At this stage of the proceeding, Clear Imaging takes no position regarding the proper construction of the claim terms in the ’450 patent because the Board

may deny the Petition, and thus resolve the dispute, without construing these terms. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). The Petition suffers significant procedural deficiencies that warrant denial without reaching the merits of Samsung's obviousness challenges, and thus the Board need not wade into issues of claim construction at this time.

Clear Imaging's silence at this stage is not a concession that Samsung's proposed constructions, here or in any other tribunal, are correct, and Clear Imaging reserves the right to present constructions for these and any other claim terms in the future.

VI. SAMSUNG DOES NOT ESTABLISH A REASONABLE LIKELIHOOD THAT ALLEN, GAL, AKIFUMI, CREATIVE CAMCORDER, AND BALMER—ALONE OR IN THE ALLEGED OBVIOUSNESS COMBINATIONS—RENDER CHALLENGED CLAIMS 1-32 UNPATENTABLE

Denial is also warranted on the merits because Samsung does not—and cannot—meet its burden of establishing a reasonable likelihood that Allen, Gal, Akifumi, Creative Camcorder, and Balmer, whether considered alone or in combination, render any of the claims of the '450 patent unpatentable.

A. Petitioner fails to identify the differences between the inventions claimed in the '450 patent and the Allen, Gal, Creative Camcorder, and Balmer references.

Petitioner has failed to identify the differences between the prior art and the inventions claimed in the '450 patent. The identification of the differences between

the prior art and the claims at issue is a fundamental first step in the obviousness analysis. *Graham v. John Deere Co.*, 383 US 1, 17-18 (1966). An obviousness analysis “measures the difference between the claimed invention and the prior art to determine whether ‘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.” *Unigene Labs.*, 655 F.3d at 1360. In other words, the difference between the prior art and the claimed inventions is the starting point of the analysis. Without an identification of the differences between the claimed inventions and the prior art under consideration, there is no way to determine the propriety of combining references.

Petitioner advances 12 Grounds in the current Petition (which it incorrectly characterizes as two grounds) and relies on the combination of Allen, Gal, Akifumi, Creative Camcorder, and Balmer. *See* Petition, 1. At no point, however, does Petitioner identify specific differences between Allen, Gal, Akifumi, Creative Camcorder, Balmer, and the claimed invention. Petitioner briefly describes the disclosures in Allen, Gal, Akifumi, Creative Camcorder, and Balmer, but Petitioner never states the principal distinctions between the references and leaves it to the Board to identify differences between the cited references and the ’450 patent. For example, Petitioner provides its interpretation of Allen, Gal, Akifumi, Creative Camcorder, and Balmer. Yet the Petitioner never explicitly informs the Board that

neither Allen nor Gal disclose (1) a unitary imaging device, (2) a unitary imaging device that stores motion data and image data, or (3) a unitary imaging device that stores the final, modified video on the imaging device itself after processing the stored image and motion data.

This type of ambiguity is impermissible and may have been included to enable Petitioner to later argue, in the district court proceeding, that Allen both anticipates and renders obvious the claims of the '450 patent under 35 U.S.C. §§ 102 and 103 if the Board denies institution. Regardless of motivation, Petitioner has intentionally obscured the distinctions between the prior art references in its 12 Grounds and the inventions claimed in the '450 patent, thus failing to provide a meaningful obviousness analysis. Moreover, Petitioner has injected uncertainty with respect to the Grounds in the Petition, raising the specter that the alleged disclaimer (SAMSUNG-1022) is not meaningful and that Petitioner intends to pursue substantially identical grounds in both this Petition and in the district court regardless of whether trial is instituted.

B. Ground 1(A): Samsung does not establish a reasonable likelihood that Allen, or the combination of Allen and Akifumi, renders claims 1-12, 14-25, and 27-31 unpatentable.

A patent is invalid as obvious if the differences between the claimed invention and the prior art are such that the claimed invention 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 the claimed invention pertains. *See* 35 USC § 103. The Supreme Court set the framework for analyzing obviousness:

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

Graham v. John Deere Co., 383 US 1, 17-18 (1966). A conclusion of obviousness “requires more than a mere showing that the prior art includes separate references covering each separate limitation” of the claimed invention. *Shopkick* (citing *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011)). Obviousness is a question of law based on multiple underlying factual determinations including “whether a [person of ordinary skill in the art] would have been motivated to combine the prior art to achieve the claimed invention.” *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016). Identifying a motivation to combine the prior art is important to prevent hindsight bias because “inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR Int’l Co. v. Teleflex Inc.*, 550 US 398, 418-19 (2007).

Petitioner has the burden of proof of establishing that it is entitled to the requested relief. 37 CFR § 42.20(c). The Petition must include a full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence. 37 CFR § 42.22(a). “The Board may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions of the evidence that support the challenge.” *Id.* The Board is required to “address only the basis, rationale, and reasoning put forth by the Petitioner in the petition, and resolve all vagueness and ambiguity in Petitioner’s arguments against the Petitioner.” *Liberty Mutual Ins. Co. v. Progressive Casualty Ins. Co.*, Case CBM2012-00003, slip op. at 10 (PTAB Oct. 25, 2012) (Paper 8).

Petitioner failed to establish a reasonable likelihood that any claim of the ’450 patent is obvious for at least the following reasons. First, as stated above, Petitioner wholly failed to identify the differences between the claimed inventions and the prior art. *Unigene Labs.*, 655 F.3d at 1360. Second, Petitioner failed to provide evidence of a person of ordinary skill in the art’s motivation to combine the many references mixed and matched in the Petition. To the contrary, Petitioner cherry picked snippets from references and, with hindsight assistance of the ’450 patent, stitched together a piecemeal obviousness case untethered from the

teachings of the various prior art references. Finally, the references themselves simply fail to disclose all of the limitations of the Challenged Claims.

- 1. Allen fails to disclose at least claim elements [1.P], [1.5], [1.6], [14.P], [14.5], [14.6], [28.P], [28.5], [28.6], [29.P], 29.5], and [29.6].**

At the outset, the “motion compensation techniques” identified in Allen appear to be inapposite to jitter control. Allen cites to a 1991 paper authored by Tse and Baker whose title, “Camera zoom/pan estimation and compensation for video compression,” has been omitted from the specification. SAMSUNG-1005, 5:27-33; EX-2013. This paper relates solely to zoom/pan motion compensation, which is explicitly disclaimed in Allen. SAMSUNG-1005, 5:53-62 (noting that only “high frequency movements of the camera” are compensated for, leaving low frequency movements “which are usually intentional panning movements” and that “[z]oom is not compensated for.”) Thus Allen appears to teach away from its own high-frequency “motion compensation techniques” as well as from what is taught in the ’450 patent (and Akifumi, as will be shown below). EX-2009, ¶44-45.

Allen fails to disclose several limitations of the Challenged independent claims of the ’450 patent. Specifically, with respect to Claims 1, 14, 28, and 29, Allen fails to disclose elements [1.P], [14.P], [28.P], and [29.P]: an “imaging device” capable of performing each of the recited claim elements. Specifically, as acknowledged by Samsung in its Petition, “Allen does not explicitly disclose that

its video camera and jitter compensation system (and/or data compression system) are part of the same device.” Petition, 15. While Samsung points to the ’450 patent specification at 11:66-12:11 to suggest that the claimed functions can be performed either as (1) part of “the imager capturing the image” or (2) as a combination of an imager and a connected computer that performs post-processing, the claims specifically recite “an imaging device” and thus claim the first of the two embodiments disclosed in that portion of the specification. For this reason alone Allen fails to anticipate Claims 1, 14, 28, and 29.

Moreover, as discussed above, Allen does not perform any modifying or combining on the imaging device, and thus does not disclose at least elements [1.5], [14.5], [28.5], and [29.5]. Allen notes that the “[p]rocessor 40 does not need to perform complex computations, but instead merely records, and in some embodiments digitizes, the sensor and zoom data and provides it as a data stream on sensor data bus 32.” SAMSUNG-1005, 5:8-14. As shown in Figure 3A, any motion compensation performed in connection with the invention is performed off of the device itself. That is, the motion compensator 44 is separate and distinct from the camera 20 (and the camera processor 40) and merely operates on the video data and sensor data passed to it by the camera.

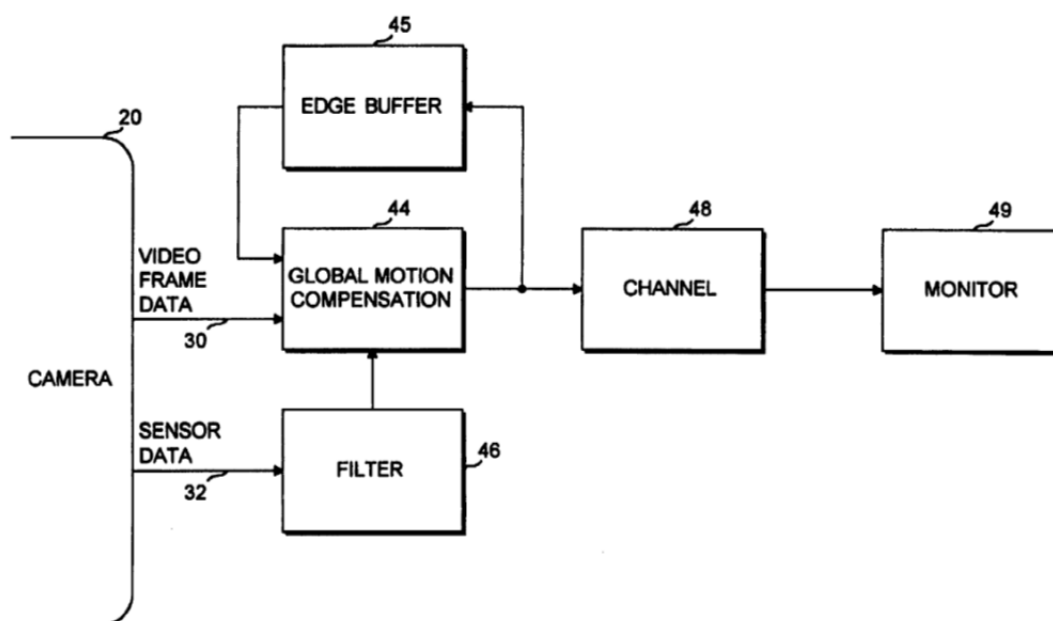


FIG. 3A

SAMSUNG-1005, Figure 3A. Here, clearly, the camera feeds video frame data and sensor data to a separate, stand-alone post processing system that performs what Allen describes as “global motion compensation.” An “imaging device” in Allen is clearly not performing all of the elements of the Challenged Claims.

Moreover, with respect to elements [1.6], [14.6], [28.6], and [29.6], the disclosure Samsung points to indicates that no “final video” at all—much less motion corrected final video—is stored on the imaging device. In particular, the “edge buffer 45” that Samsung points to as meeting this claim limitation preferably stores only the edge of a frame, and at most stores one frame. SAMSUNG-1005, 6:5-13. It does not store a multiple image final video as required by the claim.

Further, Samsung claims that if a multiple image final video is to be stored, Figure 3A shows channel 48, that could be used in addition to channel 56 shown in Figure 3B. However, Allen does not disclose any embodiment with more than one channel, and it would not have been obvious to provide multiple channels when one channel, placed somewhere in the device, already provides a level of buffering. EX-2009, ¶73.

Allen therefore describes correcting high frequency jitter caused by movement of the camera during recording, but fails to disclose a single embodiment or instance of blur correction or video correction using multiple, sequential video frames. For these reasons, Allen cannot anticipate Claims 1, 14, 28, and 29.

2. The combination of Allen and Akifumi does not remedy Allen's deficient disclosure because Allen teaches away from more on-device functionality and Akifumi does not disclose storage of image and motion data.

Recognizing the deficiencies in Allen, Samsung next proposes that the combination of Allen and Akifumi renders the Challenged Claims obvious. However, Akifumi suffers from similar deficiencies.

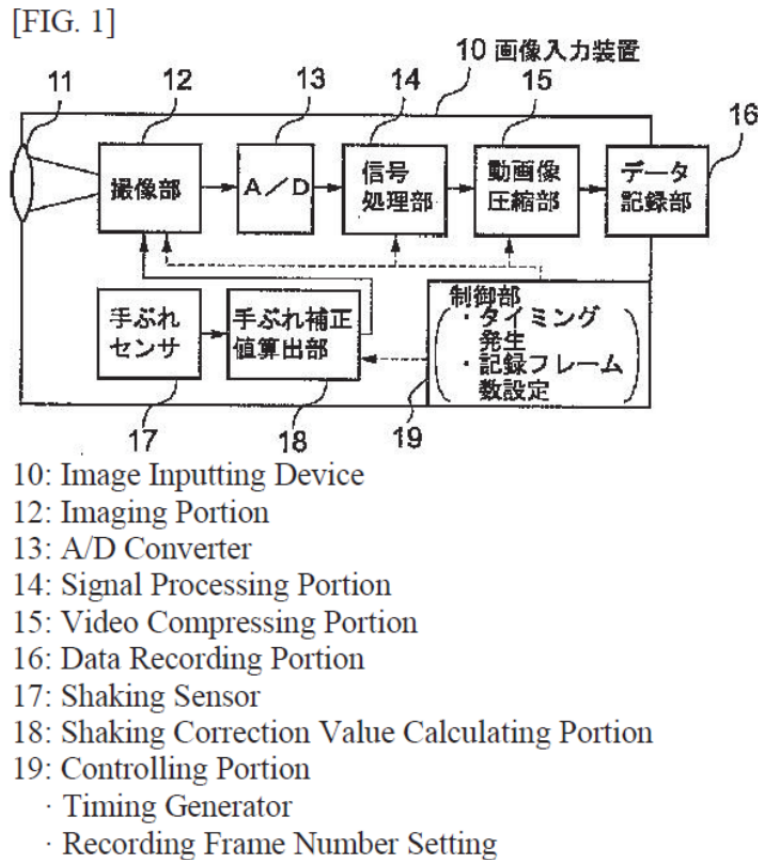
The fundamental problem faced by Samsung in its reliance on Allen (and Gal) is that they merely describe post-processing systems in which video and sensor data are sent from an imaging device to a separate computer system for

image stabilization or correction. This type of prior art is expressly recognized and distinguished in the background of the '450 patent. SAMSUNG-1001, 1:61-2:27. Because neither Allen nor Gal discloses “an imaging device” capable of performing each of the claimed functions (without post-processing on a computer), combining Allen or Gal with Akifumi does not make sense. A POSITA would not look to a post processing invention like that disclosed in Allen when Allen explicitly teaches that the “[p]rocessor 40 does not need to perform complex computations, but instead merely records, and in some embodiments digitizes, the sensor and zoom data and provides it as a data stream on the sensor data bus 32.” SAMSUNG-1005, 5:8-14. Combining Allen and Akifumi would be the antithesis of this teaching, especially if, as Samsung suggests, the processor of Allen were used to perform the many off-device aspects of motion correction. Petition, 16-17. For example, Allen teaches minimizing the function of its processor 40, while Samsung suggests adding to that processor the need to:

- control Allen’s jitter compensation system;
- control Allen’s data compression system;
- control the global motion compensator;
- control the edge buffer, frame buffer, and filter; and
- control the adder, data compressor, and channel.

Petition, 16-17. A POSITA would not, therefore, have looked to move the shake compensation functionality of Akifumi onto the imaging device in Allen. In fact, *if this were the case Allen would have proposed having its post-processing functionality on-camera from the outset*. However, Allen does not, and the reason for that is the desire to minimize the role of the camera processor as discussed in the Allen patent specification. SAMSUNG-1005, 5:8-14.

Further, Samsung provides no theory how Akifumi discloses storage of the original, unmodified images. Instead, in the embodiment discussed by Samsung and shown in Figure 1, Akifumi teaches that shake correction takes place as a video frame is received from the camera and before the video is passed through the A/D converter and ultimately stored. Samsung also does not argue that Akifumi discloses storing either unmodified images or motion data in memory. Akifumi Figure 1 is shown below.



SAMSUNG-1007, Figure 1. Here, the shaking correction value is applied to the image frame before that frame is received from the imaging portion. *Id.* at [0046]. Once the shaking correction value has been applied, the image is passed through the A/D converter 13, the signal processing portion 14, and the video compressing portion 15 before being stored in the data recording portion 16. *Id.* Figure 1.

Accordingly, Akifumi discloses an invention that is substantively different from Allen, Gal, and the '450 patent. Moreover, Akifumi has a substantively different structure from both primary references, and a POSITA would not be

motivated to combine either Allen or Gal with Akifumi absent the road map provided by the specification of the '450 patent.

3. There is no motivation for a POSITA to combine Allen and Akifumi.

Petitioner failed to prove a person of ordinary skill in the art would have been motivated to combine the alleged prior art in the manner suggested in the Petition. Identifying a motivation to combine the prior art is important to prevent hindsight bias because “inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR Int’l Co. v. Teleflex Inc.*, 550 US 398, 418-19 (2007). Petitioner failed to do so and instead urged combinations that would have been made based on vague, generalized allegations of overall benefit. These are exactly the sorts of hindsight-based justifications that have been repeatedly rejected as insufficient. *See, e.g., TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1360-61 (Fed. Cir. 2019) (citing *DSS Tech. Mgmt., Inc. v. Apple Inc.*, 885 F.3d 1367, 1376 (Fed. Cir. 2018) and noting that “‘conclusory statements and unspecific expert testimony’ did not qualify as substantial evidence that could support the Board’s conclusions regarding obviousness”).

The Petition is rife with hindsight-based reconstruction of the claimed invention using the specification of the '450 patent as a blueprint. The first

example lies in the proposed combination of Allen and Akifumi. Specifically, Allen discloses a post processing system for compensating high frequency camera movement (jitter) occurring when video is being recorded. SAMSUNG-1005, 5:38-62. Allen specifically notes that the camera processor (40 in Figure 2) is responsible for controlling zoom (42 in Figure 2) and for sending zoom information and data from the motion detectors (34, 36, and 38) to the off-device post-processing system via the sensor data bus 32.

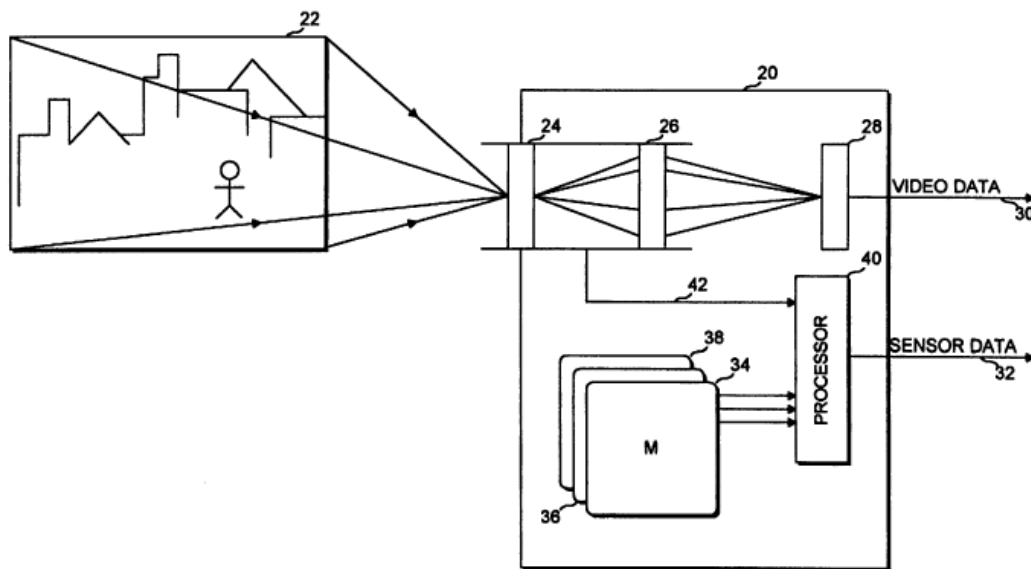


FIG. 2

SAMSUNG-1005, Figure 2. However, Allen makes it clear that the “[p]rocessor 40 does not need to perform complex calculations” because the jitter compensation functionality is not performed on-device. SAMSUNG-1005, 5:8-14.

Nevertheless, despite this explicit teaching in the specification of Allen, Samsung proposes importing the entire shake correction system of Akifumi onto Allen's camera. Petition, 15-16. But a POSITA would never make such a combination for multiple reasons. First, Allen already teaches off-device jitter correction, so why would a POSITA turn to Akifumi for its shake correction system if the jitter correction system of Allen could be moved on-camera? EX-2009, ¶78. Second, Allen answers that question because it teaches away from such a combination, emphasizing the limited role of the camera processor and the fact that the processor "does not need to perform complex computations." SAMSUNG-1005, 5:8-14. EX-2009, ¶¶78-79. Third, while Allen teaches that video and motion data may be synchronized, the system disclosed in Akifumi is different and Samsung does not show that either the original captured images or the motion data is ever recorded. EX-2009, ¶¶79-81.

Petitioner's reasons for combining Allen and Akifumi include nothing more than vague, generalized statements of benefit that are not supported by any disclosure in the references themselves. For example, Samsung contends:

Based on Akifumi's disclosure, it would have been obvious to modify Allen's video camera 20 to include (in addition to the image and motion sensors), the components of Allen's jitter compensation system and/or data compression system,

including global motion compensator 44, edge buffer 45, filter 46, frame buffer 50, motion compensator 52, adder 54, data compressor 55, and channel 56 (i.e., “memory” and “processor” components). SAMSUNG-1003, ¶¶72-75.

Petition, 16-17. But this makes no sense in view of the explicit teachings of Allen. Moreover, the three reasons Samsung’s expert provides for the combination do not hold up.

First, Samsung’s expert argues that both references “are in the same field of endeavor and are reasonably directed to solving a similar problem,” but this blatantly ignores the nature of the compensation systems and the teachings of the patents. SAMSUNG-1003, ¶77; EX-2009, ¶¶83-87. The Federal Circuit has held that “[d]emonstrating that a reference is analogous art or relevant to the field of endeavor of the challenged patent is not sufficient to establish that one of ordinary skill would have had reason to combine its teachings with other prior art in the manner set forth in the claim.” *Johns Manville Corp. v. Knauf Insulation, Inc.*, IPR2018-00827, Paper 9 at 17 (PTAB Oct. 16, 2018) (citing *Securus Techs., Inc. v. Global Tel*Link Corp.*, 701 F. App’x 971, 977 (Fed. Cir. 2017) (“a broad characterization of [prior art references] as both falling within the same alleged field . . . without more, is not enough for [Petitioner] to meet its burden of presenting a sufficient rationale to support an obviousness conclusion”).

Second, Samsung's expert argues that combining Allen and Akifumi "would have resulted in an enhanced camera with improved processing" thus "obviating/minimizing additional off-camera video processing." Petition, 17; SAMSUNG-1003, ¶78. But, again, Allen teaches away from additional camera functionality requiring "complex calculations" from the camera processor, and Samsung's expert cites to no support for this contention. SAMSUNG-1003, ¶78; EX-2009, ¶86-88. Finally, Samsung suggests that such a combination "would have been a simple design choice from a finite number of identified, predictable solutions." Petition, 17. But Samsung's expert never justifies why a POSITA would configure the processor in the Allen camera "to perform the respective operations of the above-identified 'processor components'" in Akifumi in order to produce "a high-powered camera with enhanced image/video processing capabilities" when Allen teaches away from requiring additional functionality from the camera processor. SAMSUNG-1003, ¶¶73-75; EX-2009, ¶86.

The Federal Circuit has warned against reliance on this type of conclusory and unsupported expert testimony.

We repeatedly expressed concerns that crediting such testimony risks allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—i.e., the impermissible *ex post*

reasoning and hindsight bias that *KSR* warned against. *See Van*

Os, 844 F.3d at 1361 (citing *KSR*, 550 U.S. at 418, 421, 127

S.Ct. 1727). Those same concerns apply here.

TQ Delta, LLC v. Cisco Sys., Inc., 942 F.3d 1352, 1361 (Fed. Cir. 2019) (citing *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418, 421 (2007) and *In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017)). The opinions offered in Petitioner's expert's declaration cite to portions of the prior art that simply do not support the proposed combination, and it is clear that, as in *ActiveVideo Networks*, the expert appears "to have improperly 'relied on the [challenged] patent itself as her roadmap for putting what she referred to as pieces of a 'jig-saw puzzle' together.'" *TQ Delta*, 942 F.3d at 1352 (citing *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012)).

C. Ground 1(B): The addition of Creative Camcorder does not render claims 13, 26, or 32 unpatentable.

Creative Camcorder is cited only for its alleged provisions of a user interface that can be used to modify one or more images. But Creative Camcorder merely describes using a joystick designator to shift a focal point and does not disclose how that input "modif[ies] one or more images of the sequential images." SAMSUNG-1001, Claim 13. Moreover, Creative Camcorder cannot compensate

for the aforementioned lack of disclosure from Allen and Akifumi and cannot create a reasonable likelihood that claims 13, 26, or 32 are unpatentable.

Further, the motion compensation system disclosed in Creative Camcorder is substantively different than what is recited in the Challenged Claims. For example, Creative Camcorder discloses a “motion stabilization” system in which a prism is positioned adjacent to the CCD. SAMSUNG-1008, 10. Detected motion of the camera is provided to prism actuators that move the prism in a manner that allegedly adjusts the image captured by the CCD before that image is even recorded by the CCD. *Id.*; EX-2009, ¶¶97-99. This is very different from what is recited in the Challenged Claims, in which motion data and an image are stored and the image is *only then* modified.

For these reasons, a POSITA would not look to combine Creative Camcorder with Allen or Akifumi, and any such combination would not render the Challenged Claims obvious.

D. Ground 1(C): The addition of Balmer does not render claim 27 unpatentable.

Balmer is cited for its disclosure of a system with multiple processors. However, as discussed above, Allen teaches away from on-device processing, and a POSITA would not look to Balmer in an obviousness analysis because Allen already discloses off-device post-processing capability, presumably using multiple

processors. EX-2009, ¶101-103. Accordingly, the hindsight addition of Balmer cannot create a reasonable likelihood that Claim 27 is unpatentable.

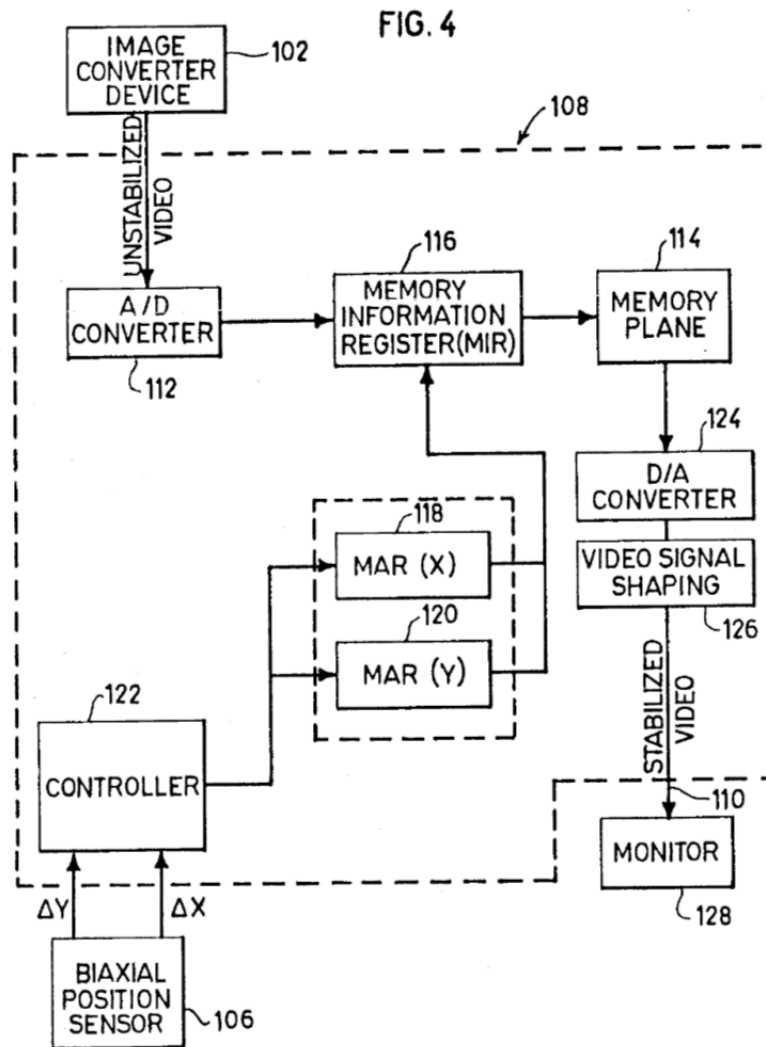
E. The references cited in Ground 1 do not create a reasonable likelihood that the Challenged Claims are unpatentable.

For the reasons discussed above, Allen doesn't disclose or suggest—and in fact teaches away from—critical claim elements. Moreover, there is no motivation to combine Allen and Akifumi, and even there were the combination fails to render independent claims 1, 14, 28, and 29 obvious. Accordingly, the remaining claims challenged in Ground 1, which depend from claims 1, 14, 28, and 29, are likewise patentable.

F. Ground 2(A): Samsung does not establish a reasonable likelihood that Gal, or the combination of Gal and Akifumi, renders claims 1-12, 14-25, and 27-31 unpatentable.

- 1. Gal fails to disclose at least claim elements [1.P], [1.1], [1.2], [1.5], [1.6], [14.P], [14.1], [14.2], [14.5], [14.6], [28.P], [28.1], [28.2], [28.5], [28.6], [29.P], [29.1], [29.2], [29.5], and [29.6].**

As discussed above, Gal discloses a “position stabilized image converter system” that uses biaxial position information recorded by sensors attached to an image sensor to stabilize captured video. Gal discloses, in Figure 4, that unstabilized video from the image converter device 102 and movement information from the biaxial position sensor 106 are routed to a computer 108.



SAMSUNG-1004, Figure 4. Image data from the light sensing elements in the image converter device are passed to the memory information register (MIR) before being routed through a D/A converter 124 when the video is to be output from the computer. *Id.*, 4:50-5:7.

However, as with Allen, Gal fails to disclose “an imaging device” (elements [1.P], [14.P], [28.P], and [29.P]) capable of performing each of the elements of claims 1, 14, 28, and 29. Instead Gal discloses another system where motion

compensation is performed by a separate computer. Accordingly, Gal fails to disclose the “imaging device” and cannot anticipate the Challenged Claims.

Samsung also provides no theory how Gal discloses that captured, unmodified images are stored in memory (*see* Claim elements [1.1], [14.1], [28.1], and [29.1]). Samsung points to the “memory plane 114” as the location where captured images are stored. Specifically, Samsung argues that “MAR-X and MAR-Y ‘control the input of the information stream from MIR 116’ (**storing the captured image**) ‘into the proper places **in the memory plane 114**’ so as ‘to compensate for the positional displacements sensed by [biaxial] sensor 106.’” Petition, 62 (emphasis added). However, as Samsung’s own statement admits, what is stored in memory plane 114 is a compensated image. The claims, however, recite storing a sequence of unmodified images that are subsequently modified based at least in part using shift values. Samsung provides no theory how this occurs in Gal.

The claims of the ’450 patent require that images be stored both before and after being modified, and Gal, as discussed below, only includes very questionable disclosure related to post-modification storage. Gal’s system is particular unsuitable to the Challenged Claims, which all require modification of one or more of a sequence of stored images.

Further, Gal fails to disclose “combining, by the processor, the modified images to obtain a final video” (elements [1.5], [14.5], [28.5], and [29.5]) or “storing the final video in the memory” (elements [1.6], [14.6], [28.6], and [29.6]). First, as noted above, Gal never performs the claimed “modifying” and “combining” steps because Samsung does not provide any theory how unprocessed images are stored in memory. Second, Gal does not disclose post-processing storage of video. Samsung, in fact, admits that “Gal doesn’t disclose storing the final video in Gal’s ‘memory’” Petition, 67. Samsung asserts a conclusory obviousness theory, relying on the statement that “the stabilized output 110 may be stored or further processed,” but Samsung identifies structure in the Gal system for such storage. In fact, the disclosure indicates any storage of a stabilized output occurs outside the computer 108 (particularly since this passage falls in the discussion of the “transmission” of the output outside the computer 108 and since there is no disclosure in Gal related to such a memory in either the image converter device or the computer 108). SAMSUNG-1004, 5:6-7; EX-2009, ¶113.

2. There is no motivation for a POSITA to combine Gal and Akifumi.

As described above, and as with Allen, Gal discloses separate post-processing of image data to compensate for measured motion of the imaging device. Nowhere in the specification of Gal is there any suggestion that the

functionality of computer 108 should be performed on the imaging device itself. The fundamental problem faced by Samsung in its reliance on Gal is that it merely describes post-processing systems in which video and sensor data are sent from a camera to a separate computer system for image stabilization or correction. Again, this type of post-processing prior art is expressly recognized and distinguished in the background of the '450 patent. SAMSUNG-1001, 1:61-2:27. Because Gal does not disclose “an imaging device” capable of performing each of the claimed functions (without post-processing on a computer), combining Gal with Akifumi would not make sense to a POSITA. EX-2009, ¶¶104-106.

The reasoning provided by Samsung’s POSITA for combining Gal and Akifumi is the same as that applied to Allen and Akifumi. Samsung first argues that a POSITA would have been motivated to combine Gal and Akifumi because “both references relate to video processing and correct/compensate for camera motion/shake.” Petition, 57. This reasoning has been rejected by the Federal Circuit and by the PTAB. *Johns Manville Corp.*, IPR2018-00827, Paper 9 at 17. And, as noted above, Allen appears to teach away from the very “motion compensation techniques” that are allegedly used to control high-frequency shaking in both Allen itself and Akifumi.

Next, Samsung’s expert suggests that “this combination would have resulted in an enhanced camera/imaging device with improved processing capabilities of

directly capturing and recording videos with reduced (or without) device motion/shake . . . thus obviating/minimizing off-camera video processing”

Petition, 57. But Samsung’s POSITA provides no support whatsoever for this assertion. SAMSUNG-1003, ¶289. Paragraph 289 is nothing more than unsupported supposition from Samsung’s expert, and the mere *ipse dixit* of such an expert cannot confer motivation to combine two distinct prior art references. *TQ Delta*, 942 F.3d at 1362 (holding that [u]ntethered to any supporting evidence, much less contemporaneous evidence, [the expert’s] *ipse dixit* declaration ‘fail[s] to provide any meaningful explanation for why one of ordinary skill in the art would be motivated to combine these references *at the time of this invention*.’”) (citing *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1349 (Fed. Cir. 2014) (emphasis in original)); EX-2009, ¶¶116-118.

Finally, Samsung’s POSITA suggests that such a combination would be “a simple design choice from a finite number of identified/predictable solutions”

Petition, 58. But that’s not correct. Samsung’s expert (SAMSUNG-1003, ¶¶284-286) provides nothing more than unsupported statements of why a POSITA would have pieced the two references together. In truth the only reason why a POSITA would seek to combine Gal and Akifumi is through hindsight reconstruction of the Challenged Claims. Samsung cannot point to any contemporaneous suggestion

otherwise without using the '450 patent as a road map. EX-2009, ¶¶116-118; *TQ Delta*, 942 F.3d at 1362.

3. The combination of Gal and Akifumi does not remedy Gal's deficient disclosure because the combination does not store the motion information or one or more images.

Further, assuming, *arguendo*, that it would be proper to combine Gal and Akifumi, the Petition does not even cite Akifumi for the storing of motion information or the storing of the captured images, but uses Akifumi only to attempt to show the storage of the final video. The deficiencies in Gal listed above, including the fact that Gal does not disclose the storage of unmodified images, are not cured by combining Gal with Akifumi.

G. Ground 2(B): The addition of Creative Camcorder does not render claims 13, 26, or 32 unpatentable.

As noted above the addition of Creative Camcorder is nothing more than hindsight on the part of Samsung in recreating the Challenged Claims. Specifically, Creative Camcorder is cited only for its alleged provision of a user interface that can be used to modify one or more images. But Creative Camcorder merely describes using a joystick designator to shift a focal point and does not disclose how that input “modif[ies] one or more images of the sequential images.” SAMSUNG-1001, Claim 13. Moreover, Creative Camcorder cannot compensate

for the aforementioned lack of disclosure from Gal and Akifumi and cannot create a reasonable likelihood that claims 13, 26, or 32 are unpatentable. EX-2009, ¶120.

H. Ground 2(C): The addition of Balmer does not render claim 27 unpatentable.

Balmer is cited for its disclosure of a system with multiple processors. However, as discussed above, a POSITA would not look to Balmer in an obviousness analysis because Gal already discloses off-device post-processing capability, presumably using multiple processors. Accordingly, the hindsight addition of Balmer cannot create a reasonable likelihood that Claim 27 is unpatentable. EX-2009, ¶121.

I. The references cited in Ground 2 do not create a reasonable likelihood that the Challenged Claims are unpatentable.

For the reasons discussed above, Gal doesn't disclose or suggest critical claim elements. Moreover, there is no motivation to combine Gal and Akifumi (and Creative Camcorder and Balmer), and even if there were, the combination fails to render independent claims 1, 14, 28, and 29 obvious. Accordingly, the remaining claims challenged in Ground 2, which depend from claims 1, 14, 28, and 29, are likewise patentable.

VII. THIS PROCEEDING SHOULD BE TERMINATED BECAUSE IT IS UNCONSTITUTIONAL.

The Board should terminate this IPR because adjudication by the panel of administrative patent judges assigned to this proceeding is unlawful. In *Arthrex*,

Inc. v. Smith & Nephew, Inc., the Federal Circuit held that “the statute as currently constructed makes the APJs principal officers” and that the appointment scheme established by Congress was therefore unconstitutional. 941 F.3d 1320, 1325 (Fed. Cir. 2019). The Court attempted to remedy this constitutional violation by severing the portion of the Patent Act allowing for at-will removal of APJs. *Id.*, 1338. The remedy attempted in *Arthrex* is insufficient for three independent reasons.

First, even after the Federal Circuit’s decision in *Arthrex*, APJs continue to wield the authority to issue final decisions on behalf of the United States without oversight or review. The removal authority created in *Arthrex* does not remedy the lack of oversight and review and the current scheme therefore continues to violate the Appointments Clause. *Edmond v. United States*, 520 U.S. 651, 664-65 (1997).

Second, IPRs are “formal adjudication[s].” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015). Assuming the APJs presiding over this IPR are removable at-will, they then lack authority to conduct “formal adjudication[s]” in accordance with 5 U.S.C. § 556. Section 556(b) provides that formal adjudications must be conducted by: (1) the agency; (2) members of the body comprising the agency; or (3) administrative law judges appointed under 5 U.S.C. § 3105. APJs do not fall in categories (1) or (2), so they necessarily fall into category (3). Under 5 U.S.C. § 7521(a), administrative law judges in category (3)

may be removed “*only for good cause* established and determined by the Merit Systems Protection Board on the record after opportunity for hearing before the Board.” Under the remedy in *Arthrex*, the APJs presiding over this IPR are removable at-will, not only for good cause, rendering this proceeding unlawful under the APA.

Retroactive application of the IPR process to patents that were issued prior to enactment of the America Invents Act (“AIA”) also violates the Takings Clause of the Fifth Amendment. Patents “have long been considered a species of property.” *Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 642 (1999). The Fifth Amendment protects such property from being taken without “just compensation.” *James v. Campbell*, 104 U.S. 356, 358 (1881); *E. Enters. v. Apfel*, 524 U.S. 498, 534 (1998). Here, the applicants pursued and obtained patent rights in exchange for disclosing their inventions prior to passage of the AIA. Applicants did so relying on an expectation regarding the value of those potential property rights.

The AIA changed these expectations regarding the value of patent rights by dramatically expanding the avenues available for attacking issued patents, thereby substantially diminishing the value of rights conferred prior to enactment of the AIA. The PTAB’s retroactive application of the IPR process to the challenged patent has substantially diminished its property value—which is a taking. The

government has provided no compensation for this taking, much less “just” compensation. When the “government takes private property without paying for it, that government has violated the Fifth Amendment.” *Knick v. Twp. Of Scott, Pa.*, 139 S. Ct. 2162, 2170 (2019).

Third, retroactive application of the IPR process to patents that issued prior to enactment of the AIA violates the Due Process Clause of the Fifth Amendment. The Due Process Clause “places limits on the sovereign’s ability to use its lawmaking power to modify bargains it has made with its subjects.” *Lynce v. Mathis*, 519 U.S. 433, 440 (1997). In the patent context, this principle means that Congress may not pass laws that retroactively “impair the right of property then existing in a patentee.” *McClurg v. Kingsland*, 42 U.S. (1 How.) 202, 206 (1843). But that is exactly what Congress did when it made the IPR regime retroactively applicable to all patents. Congress’s decision to do so was both arbitrary and irrational. Congress did not identify *any* rationale for its decision to retroactively reduce the value of patent owners’ rights by subjecting patents to attack in IPRs.

VIII. CONCLUSION

Petitioner Samsung does not—and cannot—meet its burden to show why this Petition should not be denied under 35 U.S.C. §§ 314 or to establish a reasonable likelihood to prevail on its Grounds. Discretionary denial is warranted because Petitioner is pursuing a parallel challenge in a pending district court case that will be decided long before any Final Written Decision in this proceeding. Moreover, denial is warranted on the merits because the references cited by Samsung, whether considered individually or in combination, fail to demonstrate a reasonable likelihood that even one of the Challenged Claims is unpatentable.

Respectfully submitted,

Date: November 20, 2020

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CERTIFICATION OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE** specified in 37 C.F.R. § 42.24 have 13,963 words, in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24(b)(1). This word count was prepared using Microsoft Word 2010.

Respectfully submitted,

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CERTIFICATION OF SERVICE

The undersigned hereby certifies that the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE** is being served on counsel for petitioner via electronic mail on November 20, 2020, upon W. Karl Renner, Reg. No. 41,265, Jeremy J. Monaldo, Reg. No. 58,680, and Karan Jhurani, Reg. No. 71,777 at the following email:

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