

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,**
Petitioners,

v.

MAXELL, LTD.,
Patent Owner

Case: IPR2025-01312

U.S. Patent No. 7,952,645

**PATENT OWNER PRELIMINARY RESPONSE TO PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 7,952,645**

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Patent Trial and Appeal Board
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TABLE OF EXHIBITS

Exhibit	Description
2001	Notice Letter to Samsung (July 7, 2021)
2002	Follow-up Notice Letter to Samsung (December 29, 2021)
2003	Docket Navigator Time to Trial Statistics for the Eastern District of Texas
2004	Docket Control Order, <i>Maxell, Ltd. v. Samsung Elecs. Co., Ltd.</i> , No. 5:25-cv-00052-RWS (E.D. Tex.)
2005	Jury Trial Transcript, Vol. 4, <i>Maxell, Ltd. v. Samsung Elecs. Co., Ltd.</i> , No. 5:23-cv-00092-RWS (E.D. Tex.)
2006	Complaint, <i>Maxell, Ltd. v. Samsung Elecs. Co., Ltd.</i> , No. 5:25-cv-00052-RWS (E.D. Tex.)
2007	Follow-up Notice Letter to Samsung (April 21, 2025)
2008	Law360 Article, “Maxell Settles Patent Suit Against Apple Over Mobile Tech”
2009	Law360 Article, “Maxell Scores \$43M EDTX Jury Win In ZTE Patent Trial”
2010	Law360 Article, “Maxell, Huawei Reach Terms To End Smartphone Patent Suit”
2011	Hudson Institute Article, “Google’s Loss to Sonos Settles It, Big Tech Has an IP Piracy Problem”
2012	PatentRenewal.com Article, “which-companies-hold-the-most-patents-in-the-world”
2013	Motion for Partial Summary Judgment of Validity Based on <i>Sotera</i> Stipulations, <i>Maxell, Ltd. v. Samsung Elecs. Co., Ltd.</i> , No. 5:23-cv-00092-RWS (E.D. Tex.)
2014	Follow-up Notice Letter to Samsung (November 28, 2024)
2015	Petitioner’s Invalidation Contentions (November 28, 2025)

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2016	Microcontrollers: Fundamentals and Applications with PIC
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LISTING OF CHALLENGED CLAIMS¹

Claim	Claim Text
[1.pre]	A video processing apparatus comprising:
[1.a]	an input unit to which a video signal containing contents is input;
[1.b]	a detector which detects whether pattern portions other than contents are contained in the video signal input to the input unit;
[1.c]	a corrector which corrects the video signal input to the input unit; and
[1.d]	a controller which controls the corrector to cause the corrector to correct the video signal input to the input unit when the pattern portions are not contained, and which controls the corrector to cause the corrector not to correct the video signal when the pattern portions are contained.
[2.pre]	2. The video processing apparatus according to claim 1, comprising:
[2.a]	a characteristic point detector which detects a level or distribution of at least one of luminance, hue and saturation of the video signal,
[2.b]	wherein the corrector corrects the video signal according to the level or distribution detected by the characteristic point detector.
[3.pre]	A video processing apparatus comprising:
[3.a]	an input unit to which a video signal containing contents is input;

¹ For convenience purposes only, Patent Owner adopts for this Preliminary Response the numbering of claim elements advanced by Petitioner in the Petition (Paper 2) on page vii-xi. Patent Owner does not concede the appropriateness of such grouping and numbering of claim elements.

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[3.b]	a detector which detects whether pattern portions other than contents are contained in the video signal input to the input unit;
[3.c]	a characteristic point detector which detects a level or distribution of at least one of luminance, hue and saturation of the video signal input to the input unit;
[3.d]	a corrector which changes correction characteristics according to a result of detection output from the characteristic point detector, and corrects the video signal input to the input unit; and
[3.e]	a controller which controls the corrector to cause the corrector not to change the correction characteristics in the corrector when the pattern portions are contained.
[4]	The video processing apparatus according to claim 1, wherein the pattern portions are wallpaper areas or no-picture areas having a single color added to left and right of the contents or above and below the contents and displayed.
[5.pre]	A video processing apparatus comprising:
[5.a]	an input unit to which a video signal containing contents is input;
[5.b]	a pattern portion detector which detects whether a pattern portion other than contents is contained in the video signal input to the input unit;
[5.c]	a no-picture area detector which detects whether the pattern portions are no-picture areas having a single color;
[5.d]	a corrector which corrects the video signal input to the input unit; and
[5.e]	a controller which controls the corrector to cause the corrector to correct the video signal input to the input unit when the pattern

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	portions are not contained and when the pattern portions are the no-picture areas, and which controls the corrector to cause the corrector not to correct the video signal when the pattern portions are not the no-picture areas.
[6.pre]	The video processing apparatus according to claim 5, comprising:
[6.a]	a characteristic point detector which detects a level or distribution of at least one of luminance, hue and saturation of the video signal,
[6.b]	wherein when the no-picture area detector has detected that the pattern portions are no-picture areas, the characteristic point detector detects a level or distribution of at least one of luminance, hue and saturation of the video signal other than the no-picture areas.
[7]	The video processing apparatus according to claim 5, wherein the pattern portions are portions added to left and right of the contents or above and below the contents and displayed.
[8]	The video processing apparatus according to claim 5, wherein the no-picture areas have a black color or a white color.

I. INTRODUCTION

Patent Owner Maxell, Ltd. (“Patent Owner”) respectfully requests that the Board deny institution of the Petition filed by Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc., (hereinafter “Petitioner”) challenging the patentability of claims 1-8 (“challenged claims”) of U.S. Patent No. 7,952,645 (“the ’645 Patent”) (EX1001).

Petitioner has not shown a reasonable likelihood of prevailing on any ground. None of the cited references, whether taken alone or in reasonable combination, disclose or render obvious the arrangement of each limitation in the challenged claims. For Ground 1, Petitioner has simply ignored that claim language that requires detection of “pattern **portions**,” in the video signal. In each of the grounds, Petitioner provides no explanation, not even a conclusory one, of how a mechanical switch type component (*e.g.*, a vertical limiter) corresponds to the claimed “controller” when each of the cited references (*i.e.*, Kim, Fujimura) is silent as to the presence of any “controller.”

Further, the Petition fails to articulate clear claim construction positions and compounds this defect by advancing inconsistent constructions across grounds in contravention of 37 C.F.R. § 42.104(b)(3). Worse, Petitioner even signals an intent to press different constructions in other forums, underscoring the absence of any

coherent claim-construction theory. Moreover, the Petition is filled with conclusory statements that fail to demonstrate a reasonable likelihood of success on any ground and are neither bolstered nor supported by Dr. Schonfeld's declaration, which simply parrots Petitioner's conclusions without additional analysis or evidence. *See* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.").

For at least these reasons, Petitioner has failed to meet their burden of showing a reasonable likelihood of prevailing. Accordingly, the Board should deny Petitioner's request to institute *inter partes* review.

II. BACKGROUND

A. Overview of the '645 Patent

At the time of the invention of the '645 Patent, visual display signal processing posed unique problems in the field of mobile apparatuses, which were limited in both processing power and battery life. '645 Patent at 1:31-37. Images viewed on mobile apparatuses were difficult to view if the images were not color-corrected in accordance with optimal viewing conditions to account for, for example, focusing on surrounding areas and/or sunny conditions. *Id.* at 1:37-56. The '645 Patent discloses techniques of image enhancement by processing a signal using a detector and controller to distinguish between pattern portions, including in a no-picture area,

and picture areas in a video image signal. *Id.* at 1:60-63. Once the video image signal is analyzed to detect the pattern portion and non-pattern portions, the '645 Patent discloses a corrector to control the visual display signal processing such that certain portions of the video signals are corrected while others are not based on the detection, which enhances viewing experience, limits the use of processing power, and improves battery performance. *Id.* at 1:64-67.

B. Patent Prosecution History

U.S. Patent Application No. 11/602,956, which would ultimately issue as the '645 Patent, is associated with Japanese Application 2005-338000, which was filed on November 24, 2005.

The Examiner allowed the claims on January 13, 2011. EX1002, 19. In the Notice of Allowability, the Examiner stated that: "the prior art does not disclose or suggest applying correction processing to a video signal when non-content pattern data is not detected/contained, and not applying the correction when the pattern data is detected/contained, as is claimed." EX1002, 21. The prosecution history therefore demonstrates that the USPTO recognized that the detection of pattern data other than contents and correction processing based on the detection of the '645 Patent as patentably distinct over the relevant art.

As shown below, Petitioner's cited references fail to disclose at least the same

limitations the Examiner noted as the reasons for allowance in the Notice of Allowance.

C. Summary of Petitioner's Proposed Grounds for Unpatentability

Petitioner alleges that claims 1-8 of the '645 Patent would have been obvious under pre-AIA 35 U.S.C. § 103 and raises five grounds of alleged unpatentability.

Pet. 1. The alleged invalidity grounds are summarized as follows:

Ground	'645 Claims	Type of Challenge	References
1	1-3	§ 103	Kim
2	1-4	§ 103	Fujimura
3	5-8	§ 103	Fujimura and Kim

The references relied upon by Petitioner are summarized below:

1. Kim (EX1004)

U.S. Patent Publication No. 2004/0156545 ("Kim") is entitled "Method for Detecting Pattern-Like Images and Method for Enhancing Images While Suppressing Undesirable Artifacts Caused by Pattern-Like Images." Kim is directed to using histograms to determine whether an input image is pattern-like by calculating a parameter r . EX1004, Abstract. Based on the calculated parameter, Kim states that the input image is classified as a pattern-like image. *Id.* ¶ [0039].

2. Fujimura (EX1005)

U.S. Patent No. 5,808,697, is entitled "Video Contrast Enhancer." Fujimura addresses a video contrast enhancer that determines whether a luminance signal is a letterbox signal, which consists of a picture area with black non-picture areas above and below the picture area. EX1005, 13:42-44, 13:50-54. Fujimura describes determining where a picture area starts by counting the number of bright pixels in each horizontal scanning line. *Id.* at 14:12-24.

III. LEVEL OF ORDINARY SKILL

Petitioner alleges that a person of ordinary skill in the art ("POSITA") "would have had a bachelor's degree in computer science, electrical or computer engineering, or a comparable field of study, plus approximately two to three years of professional experience with image processing, video processing, or other relevant industry experience." Pet. 4. For purposes of this preliminary response only, Patent Owner does not raise an issue with the level of ordinary skill proposed by Petitioner. Patent Owner reserves the right to contest Petitioner's definition of a POSITA in the event of institution.

IV. CLAIM CONSTRUCTION

To minimize the disputes that the Board needs to address at this preliminary stage, for the purposes of this Preliminary Response only, Patent Owner simply

applies Petitioner's own constructions to show how the Petitioner has not met its burden under 37 CFR § 42.104(b)(4), unless indicated otherwise below. Patent Owner, however, reserves all rights to dispute Petitioner's proposed constructions with the support of expert testimony to the extent the Board decides to institute review of this Petition. Any statements made herein with respect to the lack of a claim element in a prior art reference are under Petitioner's proposed constructions and should not be construed as an admission on behalf of Patent Owner that such construction is proper under the *Phillips* standard.

A. "the pattern portions are contained" (claims 1 and 3); "the pattern portions are not contained" (claims 1 and 5)

Petitioner's interpretation of "the pattern portions are contained" and "the pattern portions are not contained" is overly broad and is inconsistent with the disclosure of the '645 Patent. Accordingly, Patent Owner requests that these terms be construed and/or interpreted consistent with the intrinsic record.

Petitioner's construction of these terms is based on severing the terms from surrounding language that provides context to the terms. *See* Pet. 8-9. The relevant claim language recites the following: "a detector which detects whether **pattern portions** other than **contents** are contained in **the** video signal input to the input unit."

Petitioner analyzes these terms to state that the claim language is satisfied

when detecting that pattern portions are contained in “a video signal with some frames that contain pattern portions and some frames that do not” without any relationship of these frames to each other. Pet. 8. For example, Petitioner’s proposed construction puts no bounds as to the time period when these frames are input. For example, Petitioner provides no indication whether these frames are part of the same video transmission with adjacent frames having pattern or no pattern portions or are these frames being in put many hours apart without any relationship to each other. *See id.* The breadth to which Petitioner extends the meaning of these terms is made clearer in relation to its invalidity arguments, where Petitioner alleges that the claim language is satisfied when detecting an entire “pattern-like” image, reading out “portions” from the claim language and not providing any relationship of the pattern **portions** detected “other than contents [that] are contained in **the** video signal.” *See, e.g.,* Pet. 21-24.

This is contrary to the intrinsic record. The ’645 Patent specification repeatedly confirms that detecting whether **pattern portions** other than **contents** are contained in **the** video signal input to the input unit” pertains to detection of pattern portions in the video signal input in relation to the contents in the video input signal within the same frame or frames that have a relationship to each other. For example, the ’645 Patent refers to: (1) “one frame” multiple times when describing detector

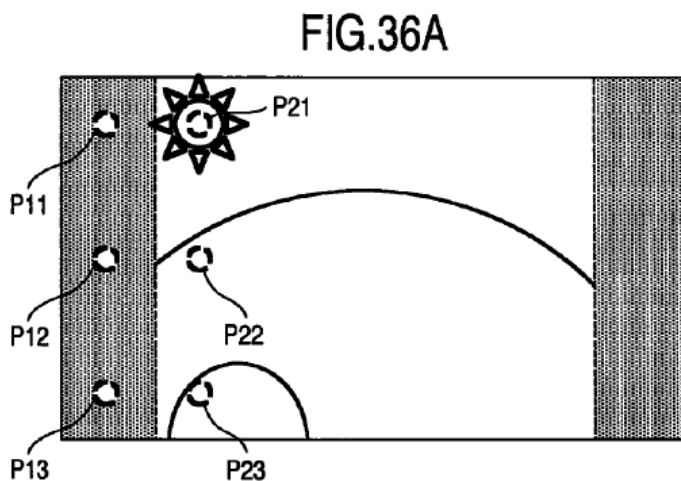
functions (see, for example, EX1001, 6:44-45, 8:11-12); (2) “taking **a** frame as **the** unit” multiple times when describing the detector functions (see, for example, EX1001, 6:67-7:3); (3) “preceding frame” multiple times when describing detector functions (see, for example, EX1001, 9:35-37, 18:20-22); and (4) “consecutive frames” multiple times when describing detector functions (see, for example, EX1001, 20:5-9).

To elaborate, the background section of the '645 Patent specifically addresses issues when converting videos with different aspect ratios and the “wallpapers [that] are added to the left and right of the contents sometimes.” EX1001, 1:41-45. The '645 Patent describes that these black no-picture areas can cause issues in correcting color. *See id.* at 1:45-56. The “object of the present invention” is therefore to address video signal correction in such a scenario—pattern portions within the same frame and/or adjacent frames such as transitioning frames that have both content and pattern portions. *See id.* 1:57-59.

The '645 Patent thus repeatedly and consistently refers to the use of a detector in a similar context—the use of a detector to detect pattern portions in the same and/or adjacent frames that are transitioning that have both content and pattern **portions** (“detects whether pattern portions other than contents are contained”), not just entirely consisting of a pattern versus contents. For example, the '645 Patent

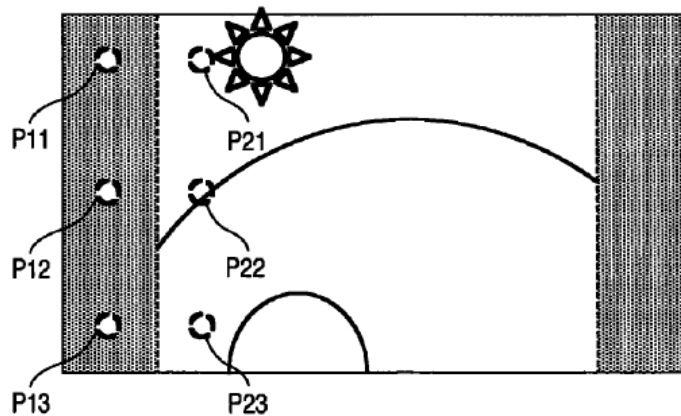
describes a detector is added to “detect pattern portion inserted on the left and right of an image,” thus referring to detection of pattern portions in the same frame as contents. *See, e.g., id.* at 16:28-31; *see also, e.g.,* EX1001, 17:11-16, 19:28-30, 20:17-22.

As additional examples, the figures and accompanying descriptions of the '645 Patent also confirm the same interpretation. For example, Figures 36A and 36B “show an example of the case where contents having pattern portions are input.” EX1001, 19:26-28. As shown below, Figures 36A and 36B show contents and pattern portions other than contents having a relationship to each other in time, not completely untethered frames where one frame is a “pattern like image” and another frame is a completely different category of image.



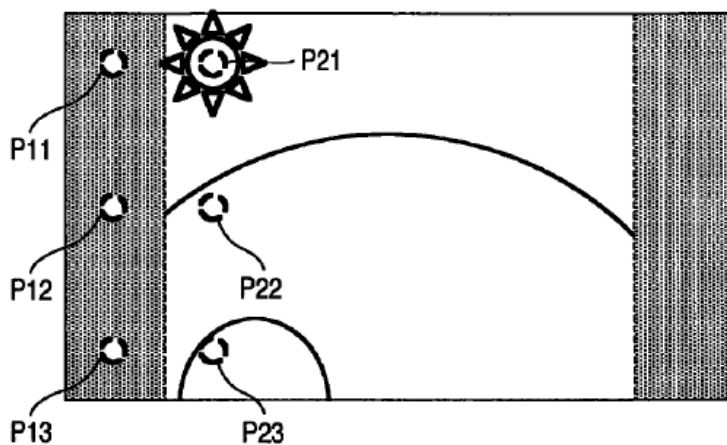
EX1001, Fig. 36A.

FIG.36B



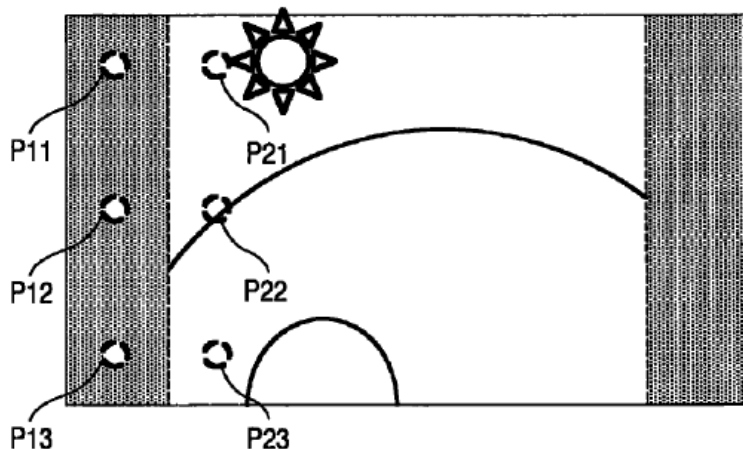
EX1001, Fig. 36B. Figures 45A and 45B similarly show detection of “pattern portions other than contents.”

FIG.45A



EX1001, Fig. 45A.

FIG.45B



EX1001, Fig. 45B.

The Federal Circuit has held that “when a patent ‘repeatedly and consistently’ characterizes a claim term in a particular way, it is proper to interpret the claim term in accordance with that characterization.” *See GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1370 (Fed. Cir. 2016); *see also VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1318 (Fed. Cir. 2014); *Aortic Innovations LLC v. Edwards Lifesciences Corp.*, No. 2024-1145, 2025 WL 2999367 at *6 (Fed. Cir. Oct. 27, 2025); *Ebates Performance Marketing, Inc., D/B/A Rakuten Rewards v. International Business Machines Corporation*, IPR-2022-00133, Paper 35, at 15-17 (P.T.A.B. May 24, 2023).

Similarly, the '645 Patent repeatedly and consistently describes the detection of pattern portions other than contents in the context of detecting pattern **portions** other than contents within the same frame and/or adjacent frames that have both

content and pattern **portions** (“detects whether pattern portions other than contents are contained”), not just detecting an entire frame that is pattern-like and another completely unrelated frame having contents.

Petitioner fails to provide any evidence that the '645 Patent is directed to detection of a pattern **portions** without any contents in the same frame or detecting pattern portions in one frame whereby the contents are in a completely unrelated and untethered section of the video input signal. Petitioner only points to the “third embodiment” where “enhancement processing” is stopped at time of display of the pattern portions. Pet. 8-9. But Petitioner provides no evidence to suggest that the detection of pattern portions occurs based on detecting a “pattern-like image” in one segment of the video input signal and contents in a completely unrelated frame rather than a frame with “pattern portions other than contents.”

At bottom, the claim language and the intrinsic record supports a construction that requires “whether pattern **portions other than contents** are contained in the video signal input,” such that “pattern portions” and “contents” are detected in the same frame, in adjacent frames, and/or in frames with a relationship to each other.

In view of the foregoing, the Board should reject Petitioner's overly broad interpretation of the claimed term that finds no support in the intrinsic record.

B. “when the pattern portions are contained” (claims 1 and 3); “when the pattern portions are not contained” (claims 1 and 5); “when the pattern portions are not the no-picture areas” (claim 5)

Petitioner fails to articulate any construction for the terms “when the pattern portions are contained” (claims 1 and 3); “when the pattern portions are not contained” (claims 1 and 5); and “when the pattern portions are not the no-picture areas” (claim 5). Petitioner further advances inconsistent claim construction positions throughout the Petition itself without any explanation for what its claim constructions are. The lack of a defined construction creates ambiguity regarding how the Petition defines the scope of the challenged claims and, standing alone, warrants denial.

Petitioner asserts that it “adopts **this apparent construction** for the purposes of this petition, but reserves the right to assert **a different meaning** in district court litigation.” Pet. 10 (emphasis added). While Petitioner’s reference to “this apparent construction” suggests reliance on a prior articulation, no such construction is actually provided. *See* Pet. 9-10. Instead, Petitioner merely states the following:

PO apparently construes “when” in these claim limitations to be broader than “whenever,” and to be satisfied by certain instances in which “the pattern portions are contained,” “the pattern portions are not contained,” and “the pattern portions are not the no-picture areas,” respectively. Specifically, in the litigation between PO and Petitioner,

PO asserts infringement of claim 1 based on, for example, the selectable “Food mode” feature of a “Camera” app that “blur[s] the sides and background of your dish.” EX1013, 58. Because the Camera app blurs the sides and background of a photographed dish only when the user taps “FOOD,” PO apparently construes “when” in these claim limitations as described above. *Id.*

Pet. 9-10. Petitioner characterizes that Patent Owner “apparently construes ‘when’ in these claim limitations to be broader than ‘whenever.’” *See id.* This characterization merely posits that there is some broader meaning being attributed to the claims. But what this broader meaning is remains unclear, because Petitioner has failed to articulate a claim construction or set any outer bounds for the disputed terms. Petitioner’s failure to provide any construction of the “when” limitations thus fails to satisfy 37 C.F.R. § 42.104(b)(3) because Petitioner has failed to clearly articulate “[h]ow the challenged claim is to be construed” in the Petition.

Moreover, while purporting to adopt some “apparent construction” for the purposes of this petition, Petitioner applies conflicting constructions throughout the Petition without any explanation or articulation for its constructions. For example, in Ground 2, Petitioner states that Fujimura’s disclosure of a vertical limiter discloses limitation [1.d]:

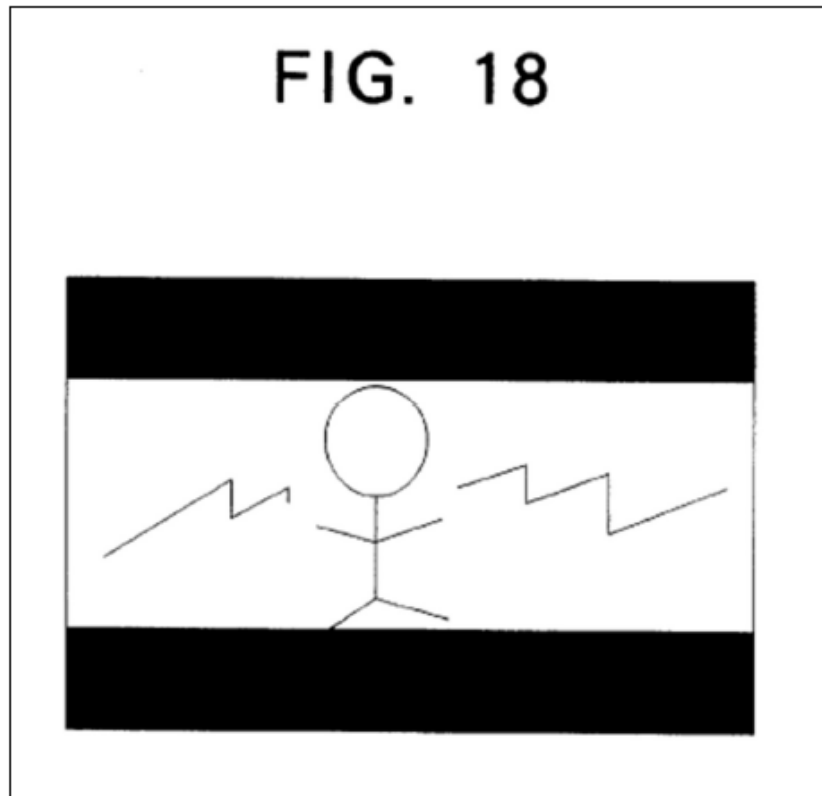
Specifically, vertical limiter 47 causes the correctors to enhance (correct) the luminance of the pixels of a scanning line (video signal) when the scanning line does not contain pattern portions (i.e., the scanning line is part of the picture area) and not to enhance (correct) the luminance of the pixels of a scanning line (video signal) when the scanning line contains pattern portions (i.e., the scanning line is part of the black non-picture bands).

Pet. 48.

In Ground 3, Petitioner states that Fujimura's disclosure of a vertical limiter discloses limitation [5.e.i]:

Next, as described for limitation 5.c, an image (video signal) may contain "non-picture bands above and below" the "picture area" of a single color (black) (the pattern portions are the no-picture areas). EX1005, 13:42-49. **In that case (when the pattern portions are the no-picture areas), each corrector enhances the picture area portion of the image (i.e., the picture area part of the video signal) and therefore still corrects the image (video signal).** As described for limitation 1.d in Ground 2, such enhancement (correct[ing]) is controlled by vertical limiter 47 (a controller), which provides letterbox control signal L to the correctors to indicate which portions of the image (video signal) are picture areas and therefore should be enhanced (controls the correctors to cause the correctors to correct the video signal). *Id.*, 13:64-14:1; *see also* §§ IV.C-E (constructions of this limitation); EX1003, ¶151 (emphasis added).

Pet. 67. Figure 18 of Fujimura, showing the “picture area” (against white background) and “non-picture bands” (black background areas) is reproduced below for reference.



Petitioner states that the same scenario (enhancing a “picture area” and **not** enhancing the “non-picture bands above and below” the picture area) is both: (1) “caus[ing] the corrector **not** to correct the video signal when the pattern portions are not the no-picture areas” (limitation [1.d]); and (2) caus[ing] the corrector **to correct** the video signal input to the input unit . . . when the pattern portions are the no-picture areas” (limitation [5.e.i]). In other words, Petitioner alleges that the same

scenario of **not** correcting the black-picture band areas can be construed to mean that (1) the corrector does **not** correct the video signal because the black-picture bands are not corrected; and (2) the corrector **does correct** the video signal because at least a portion of the video signal is being corrected. Thus, the Petition both argues that the absence of contrast enhancement in the black-picture band areas means the alleged corrector **does not correct** the video signal, but also argues that the absence of contrast enhancement in the black-picture band areas means the alleged corrector **does correct** the video signal because the presence of correction elsewhere in the frame means the corrector does correct the video signal. These mutually exclusive positions offer no coherent construction of the disputed term and render Petitioner's mapping of the limitations irreconcilable and unclear.

Petitioner compounds the problem by misrepresenting Patent Owner's infringement contentions. Patent Owner's infringement contentions do not assert that selecting a "Food" or "Portrait" mode alone satisfies the "when" limitations or results in the presence of pattern portions. Rather, the infringement contentions allege that the "when" condition is met when the system detects food or detects a face in those modes. Petitioner's reliance on a strawman construction that diverges from Patent Owner's actual position further obscures how Petitioner appears to construe the terms and underscores the Petition's lack of clarity.

C. “a result of detection output from the characteristic point detector” (claim 3)

Petitioner states that: “The plain meaning of this limitation includes a ‘result’ that is not ‘from the characteristic point detector’ but still is a result of ‘detection output’ that is from the characteristic point detector.” Pet. 11. This makes no sense because the claim language makes clear that the result of detection is “output from **the** characteristic point detector.”

Petitioner's only basis for its construction is reliance on the “last antecedent doctrine.” Pet. 11. But even the last antecedent doctrine supports Patent Owner's construction that the result is from the characteristic point detector. The issue with Petitioner's construction is that Petitioner analyzes “detection **output**” as the noun being modified when the actual noun being modified is “a **result** of detection.” “Output” in the term is not a noun but a verb form that describes that the result of detection is **outputted** from the characteristic point detector.

This is consistent with the intrinsic record. For example, the '645 Patent describes the function of a characteristic point detector 154 in the following:

A characteristic point detector **154** calculates characteristic data such as a minimum level, an average level, a maximum level and a histogram of the input video signal on the basis of the luminance signal Y input from the RGB-YUV converter **151** and the hue H and the saturation S input from the color difference-HS converter **153**. The characteristic

point detector **154** writes the characteristic data into an I/F unit **155**. The I/F unit **155** issues an interrupt signal **141** to the CPU **7** at predetermined timing. Upon detecting the interrupt signal **141**, the CPU **7** reads out the characteristic data stored in the I/F unit **155** via an internal bus **1551**, determines correction data according to a predetermined algorithm, and writes the correction data into the I/F unit **155** via the internal bus **1551**.

EX1001, 5:41-54. Therefore, the specification details that a characteristic point detector performs detection and outputs characteristic data (a “result of detection”). *Id.* The specification further details that the CPU **7** “reads out the characteristic data” and determines correction data based on the characteristic data (“a corrector which changes correction characteristics according to a result of detection”). *Id.*

Petitioner's construction is not only unsupported, but vague and provides no indication as to how Petitioner seeks to construe the term. Petitioner only states that the “result” does not have to be “from the characteristic point detector.” Pet. 11-12. While Petitioner advocates for a construction broader than that of the claim language, Petitioner again fails to define the metes and bounds of how the term should be construed. This failure is in contravention of the requirements of a Petition under 37 C.F.R. § 42.104(b)(3).

In view of the foregoing, the Board should reject Petitioner's overly broad interpretation of the claimed "mobile terminal" that finds no support in the intrinsic record.

V. LEGAL STANDARD

A claim is also not patentable if the differences between the claim and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time of the invention. 35 U.S.C. § 103(a). Obviousness requires assessing (1) the "level of ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the claims at issue," and (4) "secondary considerations" of non-obviousness such as "commercial success, long felt but unsolved needs, failure of others, etc." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966)).

It is a petitioner's burden "to demonstrate both 'that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.'" *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367-68 (Fed. Cir. 2016) (quotations and citations omitted). However, a petitioner must first show that all of the claimed elements are

disclosed in the prior art. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1164 (Fed. Cir. 2006) (considering motivation to combine and reasonable expectation of success only “if all the elements of an invention are found in a combination of prior art references”).

VI. THE BOARD SHOULD DENY INSTITUTION IN VIEW OF PETITIONER'S INTENT TO BUILD INCONSISTENT CLAIM CONSTRUCTION RECORDS

Petitioner states: “Petitioner adopts this apparent construction for the purposes of this petition, but reserves the right to assert a **different meaning in district court litigation.**” Pet. 10 (emphasis added). Petitioner further states that “Petitioner does not contend that its proposed constructions are **complete constructions** of these limitations or the claims for **any other purpose**, including for issues that have been raised in the related litigation.” Pet. 5 (emphasis added).

By providing such a broad reservation of rights, Petitioner explicitly indicates that it will take different claim construction positions based on “reserv[ing] the right to assert a **different meaning** in district court litigation.” *Id* (emphasis added). Such lack of specificity and reservation of rights does not comply with the requirements of 37 C.F.R. § 42.104(b)(3) and this Board's prior decisions and will result in development of inconsistent records by Petitioner across multiple forums.

Specifically, under 37 C.F.R. § 42.104(b)(3), petitioners must clearly articulate **in the petition** “[h]ow the challenged claim is to be construed.” According to Petitioner, its claim construction positions in this Petition are non-limiting. Petitioner leaves it to the Board to construe such limitations to assess Petitioner’s invalidity challenges, which fails to ensure that the District Court litigation record (and/or the PTAB record) results in a consistent record when considering the validity of the patent with respect to other validity challenges such as §112. Indeed, Petitioner has done just that in prior IPRs where it argued for a plain and ordinary meaning of “character” in IPR2024-00735 and IPR2024-00777, but argued for a narrower construction of the same term in a jury trial to argue for non-infringement. *See, e.g., Samsung Electronics Co. Ltd. et. al. v. Maxell Ltd.*, IPR2024-00735, Paper 38, at 9-10 (P.T.A.B. Sept. 24, 2025); *see also Samsung Electronics Co. Ltd. et. al. v. Maxell Ltd.*, IPR2024-00828, Paper 39, at 6-10 (P.T.A.B. Sept. 15, 2025) (not requiring two “modes” to correspond to two algorithms in the IPR but arguing in front of the jury that two modes require the implementation of two algorithms).

A petitioner is required to explain why it takes different claim construction positions in the petition and in the district court. Asserting different claim construction positions in the two forums alone favors denial of institution. *See Revvo Technologies, Inc. v. Cerebrum Sensor Technologies, Inc.*, IPR2025-00632, Paper

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20 (P.T.A.B. Nov. 3, 2025) (precedential) (a petitioner must explain why it takes different claim construction positions in the petition and in district court); *American Airlines, Inc. et al v. Intellectual Ventures II LLC*, IPR2025-01055, Paper 11 (Nov. 21, 2025) (denying institution when Petitioner was construing terms as plain and ordinary in the Petition, yet arguing for indefiniteness in a different forum).

Instead of agreeing to be bound by the claim construction positions or lack thereof set forth in this Petition, Petitioner “reserves the right to assert a different meaning in district court litigation.” Pet. 10. The Board or Patent Owner should not be burdened with such an unbounded position on claim construction when defending its patent rights. Indeed, this is the precise reason why 37 C.F.R. § 42.104(b)(3) requires Petitioner to explain how the challenged claims are to be construed. Petitioner cannot have it both ways. As a germane example, in the District Court proceeding, Petitioner alleges that claim 5 of the '645 Patent is invalid for lack of written description, yet makes no mention of such a challenge here. *See* EX2015, 180.

Accordingly, for this reason alone the Board should deny institution of this petition.

VII. PETITIONER'S EXPERT DECLARATION IS ATTORNEY ARGUMENT PRESENTED IN THE CLOTH OF EXPERT TESTIMONY

Petitioner relies on a declaration from its expert Dr. Schonfeld (EX1003).

However, Dr. Schonfeld copies verbatim Petitioner's arguments and lacks sufficient facts and data to support his positions. For example:

Petition	Dr. Schonfeld's Declaration (EX1003)
<p>If PO argues that Fujimura does not disclose any limitation of the challenged claims, such limitation would have nonetheless been obvious to a POSITA in light of Fujimura. Practicing any limitation of the challenged claims in light of Fujimura would have been within the knowledge and skill of a POSITA, would have required minimal effort, would have yielded predictable results, would have been fully compatible with Fujimura, and would have been a mere design choice. Motivation to do so arises from at least common sense and the disclosures of Fujimura set forth above. EX1003, ¶135. (Pet. 59)</p>	<p>If Patent Owner argues that Fujimura does not disclose any element of the challenged claims, such element would have nonetheless been obvious to a POSITA in light of Fujimura. Practicing any element of the challenged claims in light of Fujimura would have been within the knowledge and skill of a POSITA, would have required minimal effort, would have yielded predictable results, would have been fully compatible with Fujimura, and would have been a mere design choice. Motivation to do so arises from at least common sense and the disclosures of Fujimura set forth above. (EX1003 ¶ 135)</p>
<p>A POSITA would have understood that the disclosed functionality is performed by executing instructions in a CPU or equivalent, or performed by a hardware equivalent to such a CPU, because without such a component, there would be no apparatus to implement the disclosed functionality. Kim also</p>	<p>A POSITA would have further understood that the disclosed functionality is performed by executing instructions in a general-purpose processor such as a CPU or equivalent, or performed by a hardware equivalent to such a CPU, because such a component would be required to</p>

Petition	Dr. Schonfeld’s Declaration (EX1003)
<p>inherently (necessarily) discloses such a CPU or equivalent for the same reasons. It also would have been obvious to a POSITA to implement the functionality of Figure 4 in a CPU or equivalent as a well-known way of implementing such functionality. Such a CPU would have been well-known to a POSITA. <i>E.g.</i>, EX1005 (Fujimura), 4:6-11 (image processing system can be implemented in a “general-purpose processor”). Motivation to do so arises from common sense and Fujimura, which discloses implementing any component of an image processing system in a “general-purpose processor.” <i>See</i> Ground 2, limitation 1.c; EX1003, ¶74. (Pet. 26)</p>	<p>implement the disclosed functionality. Kim also inherently (necessarily) discloses a processor such as a CPU or equivalent for the same reasons. It would have been obvious to a POSITA to implement the functionality of Figure 4 in a CPU or equivalent as a well-known way of implementing such functionality. Such a CPU would have been well-known to a POSITA. <i>E.g.</i>, EX1005 (Fujimura), 4:6-11 (image processing system can be implemented in a “general-purpose processor”). Motivation to do so arises from common sense and Fujimura, which discloses implementing any component of an image processing system in a “general-purpose processor.” <i>See</i> Ground 2, element 1.c. (EX1003 ¶ 74)</p>
<p>If PO argues the portions of Fujimura cited above relate to different, incompatible embodiments (which they do not), it would have been obvious to a POSITA to combine such embodiments into a single system at least because such embodiments are described in the same prior art reference, are fully compatible with each other, and could be combined with minimal effort to achieve predictable results. EX1003, ¶134. (Pet. 59)</p>	<p>If Patent Owner argues the portions of Fujimura cited above relate to different, incompatible embodiments (which they do not), it would have been obvious to a POSITA to combine such embodiments into a single system at least because such embodiments are described in the same prior art reference, are fully compatible with each other, and could be combined with minimal effort to achieve predictable results. (EX1003 ¶ 134)</p>

Dr. Schonfeld does not provide any other analysis or explanation why a POSITA would find something obvious or be motivated to modify Kim or Fujimura other than Petitioner's own conclusory and boilerplate statements. The above citations are merely exemplary. Petitioner employs the same tactics for each Ground. *See, e.g.*, Pet. 26, 59, 69-71.

Such conclusory and superficial attorney argument in the guise of expert testimony cannot serve as sufficient support for Petitioner's arguments. *See, e.g., Cardiocom, LLC v. Bosch Healthcare Sys., Inc.*, IPR2013-00439, Paper 26, 15-16 (P.T.A.B. Jan. 16, 2014); *see also Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, IPR2014-00529, Paper 8, 15-16 (P.T.A.B. Sept. 23, 2014) ("Merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value," and a petitioner cannot move forward to trial based upon such "mere conclusory statements.") (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *TRW Auto. US LLC v. Magna Elecs., Inc.*, IPR2014-00258, Paper 18, 10-11 (P.T.A.B. Aug. 27, 2014) (giving little to no weight to expert testimony that "did not elaborate on [Petitioner's] position because it simply repeated [Petitioner's] conclusory statements verbatim"); *see also InfoBionic, Inc. v. Braemar Mfg., LLC*, IPR2015-01704, Paper 11, 6 (P.T.A.B. Feb. 16, 2016) (denying institution because expert merely repeated the argument in the Petition about what a

reference meant without explaining why the expert believed that meaning to be correct).

Moreover, such conclusory opinions by an expert that merely parrot Petitioner's arguments should be accorded little weight when used to supply a missing limitation. *See Xerox Corp. et al. v. Bytemark, Inc.*, IPR2022-00624, Paper 12, 5 (P.T.A.B. Feb. 10, 2023) (Former Director Vidal noting in a Sua Sponte affirmation of the decision: "I determine that the Board was correct in giving little weight to Petitioner's expert because the expert declaration merely offered conclusory assertions without underlying factual support and repeated, verbatim, Petitioner's conclusory arguments."). Former Director Vidal stated that:

The declaration does not provide any technical detail, explanation, or statements supporting why the expert determines that the feature in question was required or would have been obvious based on the prior art disclosure. See Ex. 1003 ¶54. Instead, the declaration copies, word-for-word, Petitioner's conclusory assertions. *Compare id.*, with Pet. 28–29. The declaration sets forth Petitioner's conclusory assertions as though they are facts, rather than setting forth facts and evidence in support of Petitioner's assertions. Accordingly, I agree with the Board's explanation that "the cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight" under 37 C.F.R. § 42.65(a).

Id. As discussed *infra*, Dr. Schonfeld's "opinions" are copied verbatim from the Petition, including in attempting to fill in missing limitations in violation of 37 C.F.R. § 42.104(b)(4).

Therefore, little to no weight should be given to Dr. Schonfeld's testimony. And, absent his conclusory testimony, the Petition has no evidentiary support. Institution should be denied for this reason.

VIII. THE PETITION DOES NOT SHOW A LIKELIHOOD OF PREVAILING WITH RESPECT TO ANY CHALLENGED CLAIM

A. Ground 1: Petitioner Fails to Establish That Claims 1-3 Would Have Been Obvious Based on Kim

1. Petitioner Fails to Establish That Claim 1 Would Have Been Rendered Obvious In View of Kim

a. Petitioner Fails to Establish That Claim Limitation [1.b] Would Have Been Rendered Obvious In View of Kim

Claim limitation [1.b] recites "a detector which detects whether pattern portions other than contents are contained in the video signal input to the input unit." Petitioner fails to establish that claim limitation [1.b] would be rendered obvious in view of Kim. Pet. 21-24.

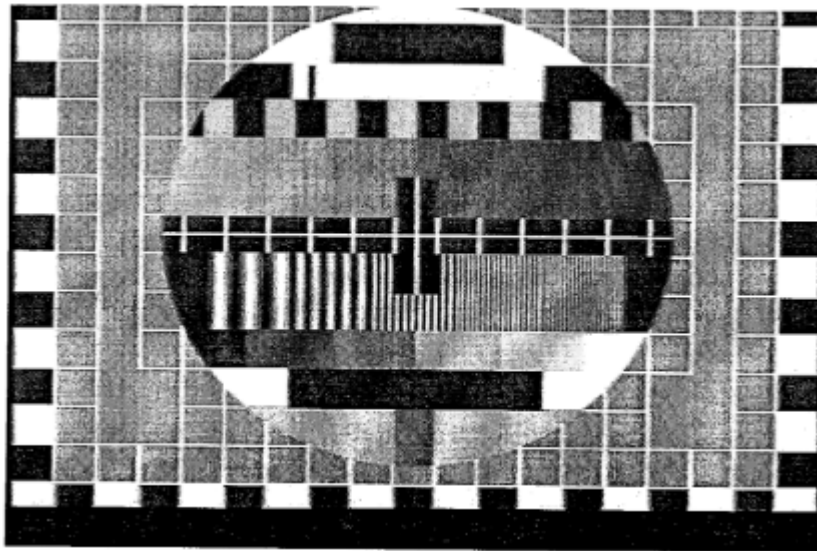
Petitioner alleges that this limitation is satisfied by the "*r* calculation device 34" of Figure 4 of Kim as the alleged "detector." Pet. 22. Petitioner also appears to

allege this limitation is satisfied by “apparatus 20 of Figure 3.” Pet. 23 (“Thus, apparatus 20 of Figure 3 also is the *detector* of this limitation for the same reasons that ‘*r* calculation device 34’ of Figure 4 is.”).

Kim discloses that *r* calculation device 34 determines whether the image is “most likely a pattern-like image.” EX1004 ¶ [0039]. For example, Kim discloses determining a value *r* to determine whether the input image should be classified as a pattern-like image. *See id.* Therefore, Kim discloses a binary classification system—the input image is either classified as a pattern-like image or not (a “normal image”). Notably, Kim does not describe the determination of a pattern-like image as based on a normal image, or determining “portions” of a video signal. *See, e.g., id.*

Kim’s binary classification system thus fails to satisfy claim limitation [1.b]. For example, Kim’s *r* calculation device 34 does not “detect[]whether pattern **portions other than contents** are contained in the video signal input.” Kim fails to describe any analysis of whether determined pattern-like images are “pattern portions other than contents.” Instead, Kim only determines whether an entire input image should be classified as “pattern-like” or not, never disclosing detection of actually **portions** in the signal. *See* EX1004 ¶ [0039]. Indeed, Kim is completely silent as to any disclosure of “portion” or “part” or “segment” or “section,” let alone

providing detection of a “portion” or “part” or “segment” or “section” of a signal. In contrast, Kim refers to “pattern-like **image**” over eighty times including in the Title, Abstract, Claims, Background of the Invention, Filed of the Invention, Summary of the Invention, Brief Description of the Drawings, and Description of the Preferred Embodiments sections. *See generally id.* Thus, Kim repeatedly emphasizes detecting when the entire image is “pattern-like” as shown in Figure 1 of Kim below:



Kim at Fig. 1

Kim fails to disclose detecting whether there are pattern **portions** other than **contents** in the video signal. Kim's classification system thus fails to identify any pattern portions **other than contents**. Instead, the “pattern-like image” is the content

in the image and therefore cannot satisfy the claim language, which requires detection of pattern portions **other than contents**.

For at least the foregoing reasons, Petitioner fails to show a reasonable likelihood of success in establishing that claim limitation [1.b] would have been rendered obvious based on Kim. Accordingly, the Petition should be denied.

b. Petitioner Fails to Establish That Claim Limitation [1.d] Would Have Been Rendered Obvious In View of Kim

Claim limitation [1.d] recites “a controller which controls the corrector to cause the corrector to correct the video signal input to the input unit when the pattern portions are not contained, and which controls the corrector to cause the corrector not to correct the video signal when the pattern portions are contained.” Petitioner fails to establish that claim limitation [1.d] would be rendered obvious in view of Kim. Pet. 27-29.

Petitioner alleges that the “Calculation device 34 therefore is the recited controller that controls mixer 6.” Pet. 27 However, Petitioner and its expert provide no analysis of how the “calculation device 34” meets the language of “controller” or “controller which controls the corrector.” *See* Pet. 27-29.

Under plain and ordinary meaning, a controller, at a minimum, comprises some sort of processing circuitry, such as a central processing unit (“CPU”). *See*,

e.g., EX2016, 3 (“[m]icrocontrollers combine the fundamental resources available in a microcomputer such as the CPU, memory, and I/O resources in a single chip”).

As another example, the following block diagram of a microcontroller shows the inclusion of processing circuitry (CPU):

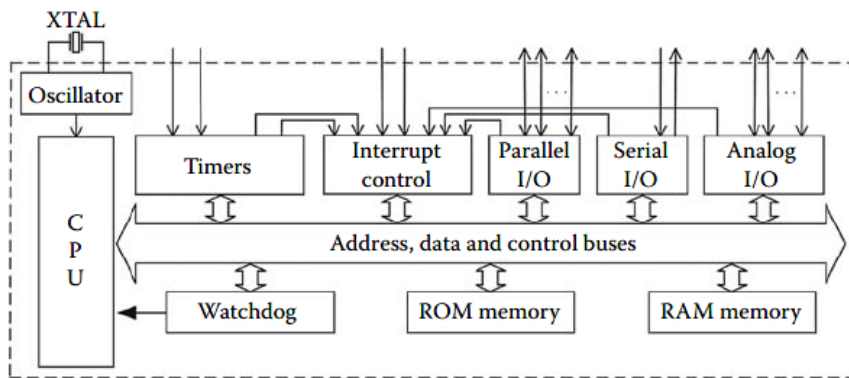


FIGURE 1.2
Basic block diagram of a microcontroller.

Id. at 4.

This is consistent with the description of a controller in the '645 Patent. The '645 Patent describes that a CPU causes correction of the video signal input based on when the pattern portions are contained:

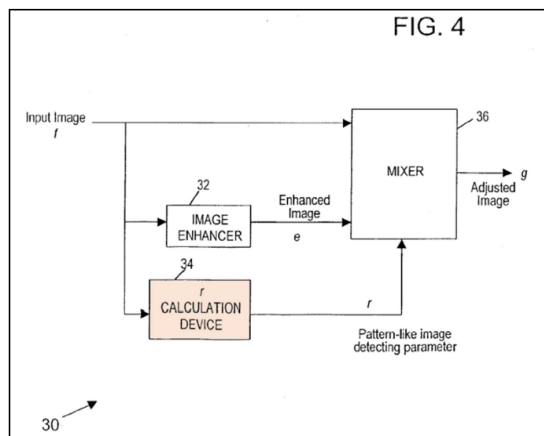
FIG. 34 shows a processing flow in the CPU 7. Correction characteristics update processing in the CPU 7 is executed by receiving the interrupt 141 from the I/F unit 155. When the pattern flag is “0” at S3401, i.e., when there is no pattern portion, the CPU 7 calculates correction data to conduct the picture quality enhancement processing by using the method described in the first embodiment or the second

embodiment at S3402, and transmits the correction data to the I/F unit 153 (S3404). When the pattern flag is “1” at S3401, i.e., when there is a pattern portion, the CPU 7 sets correction data=“0” at S3403, and transmits the correction data to the I/F unit 153 (S3404).

EX1001, 18:50-61.

Petitioner points to a calculation device, but fails to address how the calculation device itself satisfies the claim language of “controller.” The entirety of the Petition’s analysis of the “controller” aspect of this limitation follows:

Kim also discloses that “r calculation device 34” calculates r, which is input to mixer 36. EX1004, ¶43, Fig. 4 (annotated orange below). Calculation device 34 therefore is the recited controller that controls mixer 36 (at least part of the corrector) to correct or not correct image f from the incoming video, as described above.



Kim also discloses that “r calculation device 34” calculates r, which is input to mixer 36. EX1004, ¶43, Fig. 4 (annotated orange below).

Calculation device 34 therefore is the recited controller that controls mixer 36 (at least part of the corrector) to correct or not correct image f from the incoming video, as described above.

This controller plus the portion of mixer 36 that applies equation 6 is the recited controller for the same reasons. EX1003, ¶76. If PO argues that the recited controller must be separate from the detector of limitation 1.b, it is incorrect. The claim recites these limitations functionally rather than structurally, and no intrinsic evidence prohibits them from overlapping or from one being a subpart of the other. It also would have been obvious to a POSITA to implement calculation device 34 as separate detector and controller modules, where the detector would calculate r and the controller would apply r via equation 6, as a mere design choice. Motivation to do so arises at least from a desire to compartmentalize functionality in different modules for organizational purposes. EX1003, ¶77.

Pet. 27-29. As shown above, Petitioner provides no evidence that a black box calculation device 34 itself is a “controller” under its plain and ordinary meaning. None whatsoever. They cannot because the entirety of disclosure of Kim is completely silent as to a “controller” or “CPU,” let alone disclosing a controller or CPU within the context of calculation device 34. *See* EX1004.

While the Petition cites to its expert declaration (EX1003), the expert declaration is essentially a word-for-word duplication of the Petition. Such

conclusory and superficial attorney argument in the guise of expert testimony cannot serve as sufficient support for Petitioner's arguments. *See, e.g., Cardiocom, LLC v. Bosch Healthcare Sys., Inc.*, IPR2013-00439, Paper 26, 15-16 (P.T.A.B. Jan. 16, 2014); *see also Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, IPR2014-00529, Paper 8, 15-16 (P.T.A.B. Sept. 23, 2014) ("Merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value," and a petitioner cannot move forward to trial based upon such "mere conclusory statements." (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006))); *TRW Auto. US LLC v. Magna Elecs., Inc.*, IPR2014-00258, Paper 18, 10-11 (P.T.A.B. Aug. 27, 2014) (giving little to no weight to expert testimony that "did not elaborate on [Petitioner's] position because it simply repeated [Petitioner's] conclusory statements verbatim"); *see also InfoBionic, Inc. v. Braemar Mfg., LLC*, IPR2015-01704, Paper 11, 6 (P.T.A.B. Feb. 16, 2016) (denying institution because expert merely repeated the argument in the Petition about what a reference meant without explaining why the expert believed that meaning to be correct).

Indeed, taken together with Petitioner's Ground 3, the conclusory nature of Petitioner's obviousness analysis is laid bare where for its cited reference Fujimura Petitioner points to a black box "vertical limiter 47," as the claimed controller. *See infra* Section VIII.B.2.b. In both instances, Petitioner and its expert provide no

explanation as to how either black box component corresponds to the claimed “controller.” Pointing to two completely different components in different prior art references—without any explanation or evidence—is not a sufficient basis for establishing obviousness.

Put simply, the Petition fails to address how a calculation device satisfies the **controller** aspect recited in limitation [1.d] and thus fails to show how limitation [1.d] is rendered obvious by Fujimura.

2. Petitioner Fails to Establish That Claim 2 Would Have Been Rendered Obvious in View of Kim

Claim 2 depends from claim 1. Therefore, for at least the reasons provided above in relation to claim 1 in Ground 1, Petitioner fails to establish that claim 2 would have been rendered obvious based on Kim.

3. Petitioner Fails to Establish That Claim 3 Would Have Been Rendered Obvious in View of Kim

In relation to limitation [3.b], Petitioner merely cites back to limitation [1.b]. Pet. 32. (“Kim discloses this limitation. *See* limitation 1.b.”). Therefore, for the reasons provided above in relation to limitation [1.b], Petitioner fails to establish that claim limitation [3.b] would have been rendered obvious in view of Kim.

In relation to limitation [3.e], Petitioner relies on similar rationale as in limitation [1.d] Pet. 33 (“As described for limitation 1.d, calculation device 34 is a

controller that controls mixer 36.”). As provided above in relation to limitation [1.d], Petitioner provides no analysis for how the r control device satisfies the “controller” aspect of the limitation. *See id.; supra* Section VIII.A.1.b. Therefore, Petitioner fails to establish that claim limitation [3.e] would have been rendered obvious in view of Kim.

B. Ground 2: Petitioner Fails to Establish That Claims 1-4 Would Have Been Obvious Based on Fujimura

1. Petitioner Fails to Establish That Claim 1 Would Have Been Rendered Obvious In View of Fujimura

a. Petitioner Fails to Establish That Claim Limitation [1.b] Would Have Been Rendered Obvious In View of Fujimura

Claim limitation [1.b] recites “a detector which detects whether pattern portions other than contents are contained in the video signal input to the input unit.” Petitioner fails to establish that claim limitation [1.b] would be rendered obvious in view of Fujimura. Pet. 39-42.

On one hand, Petitioner alleges that this limitation is satisfied by the “letterbox signal detector 46” of Fujimura as the alleged “detector.” Pet. 40. On the other, Petitioner tacitly admits that Fujimura’s letterbox signal detector fails to detect patterns when discussing an alleged motivation to combine with respect to Ground 3. *See* Pet. 70-71. For example, Petitioner states that a POSITA would be motivated

to “add Kim’s functionality cited above to Fujimura to account for such pattern images” and that “[a]though Fujimura discloses detecting letterbox video signals such as by decoding the video signal’s ‘ID code,’ as described for limitation 5.c, the pattern image of Kim’s ¶ 1 (and similar patterns) are not letterbox patterns and therefore **would not be detected by Fujimura’s letterbox signal detector.**” Pet. 70-71.

But Fujimura does not detect whether pattern portions other than contents are contained, instead it detects whether an image is, of a particular format, *i.e.*, a letterbox format. For example, Fujimura’s letterbox detector “determines whether the luminance signal Y is a letterbox signal,” and if so, the letterbox signal detector 46 “outputs a pair of line numbers specifying the starting and ending lines of the picture area in the image.” EX1005, 13:50-58. This is in contrast to the claim that requires a detector that determines whether “pattern portions other than contents” are contained in the input video signal.” Fujimura’s detection of whether a luminance signal is a letterbox signal fails to satisfy this limitation, because Fujimura fails to disclose any detection of “**pattern** portions other than contents.” Fujimura is completely silent on pattern detection and fails to disclose or refer to pattern detection at all. *See, e.g.*, EX1005, 13:50-58. Fujimura’s operation is clarified further when considering that the letterbox detector also “determines whether a caption is

present in the non-picture band beneath the picture area.” EX1005, 13:53-58. The presence of a caption indicates contents, yet Petitioner's mapping necessitates that the caption would be included as part of the alleged “pattern portions” because Fujimura merely detects whether a luminance signal is a letterbox signal or not. *See, e.g.*, EX1005, 13:50-58.

For at least the foregoing reasons, Petitioner fails to show a reasonable likelihood of success in establishing that claim limitation [1.b] would have been rendered obvious based on Fujimura. Accordingly, the Petition should be denied.

b. Petitioner Fails to Establish That Claim Limitation [1.d] Would Have Been Rendered Obvious In View of Fujimura

Claim limitation [1.d] recites “a controller which controls the corrector to cause the corrector to correct the video signal input to the input unit when the pattern portions are not contained, and which controls the corrector to cause the corrector not to correct the video signal when the pattern portions are contained.” Petitioner fails to establish that claim limitation [1.d] would be rendered obvious in view of Fujimura. Pet. 45-48.

Petitioner alleges that the “vertical limiter 47” is the “controller which controls the corrector.” Pet. 48 (“Thus, vertical limiter 47 is a controller that controls luminance contrast enhancer 2 (a corrector of limitation 1.c) and its primary mapper

12 (an additional corrector of limitation 1.c) by limiting their luminance contrast enhancement to the scanning lines of the picture area.”). However, Petitioner and its expert provide no analysis of how the vertical limiter 47 meets the language of “controller” or “controller which controls the corrector.” *See* Pet. 45-48. They cannot because Fujimura is completely silent as in relation to “controller” or “CPU,” let alone disclosing a controller or CPU within the context of vertical limiter 47.

Under plain and ordinary meaning, a controller, at a minimum, comprises some sort of processing circuitry, such as a central processing unit (“CPU”). *See, e.g.,* EX2016, 3 (“[m]icrocontrollers combine the fundamental resources available in a microcomputer such as the CPU, memory, and I/O resources in a single chip”). As another example, the following block diagram of a microcontroller shows the inclusion of processing circuitry (CPU):

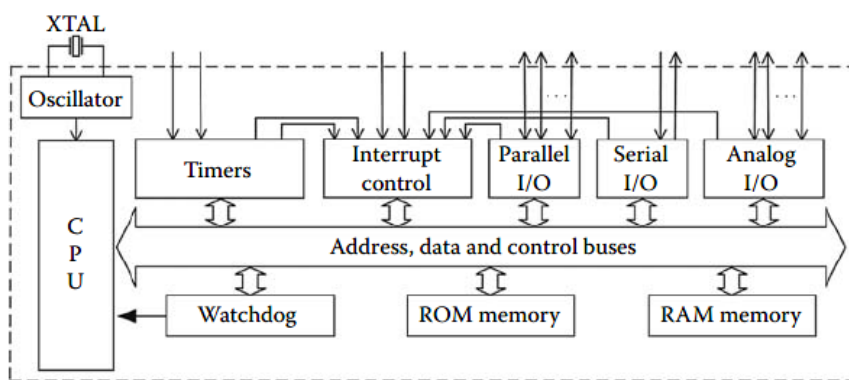


FIGURE 1.2
Basic block diagram of a microcontroller.

Id. at 4.

This is consistent with the description of a controller in the '645 Patent. The '645 Patent describes that a CPU causes correction of the video signal input based on when the pattern portions are contained:

FIG. 34 shows a processing flow in the CPU 7. Correction characteristics update processing in the CPU 7 is executed by receiving the interrupt 141 from the I/F unit 155. When the pattern flag is "0" at S3401, i.e., when there is no pattern portion, the CPU 7 calculates correction data to conduct the picture quality enhancement processing by using the method described in the first embodiment or the second embodiment at S3402, and transmits the correction data to the I/F unit 153 (S3404). When the pattern flag is "1" at S3401, i.e., when there is a pattern portion, the CPU 7 sets correction data="0" at S3403, and transmits the correction data to the I/F unit 153 (S3404).

EX1001, 18:50-61.

Petitioner points to a vertical limiter and a resultant restriction of contrast enhancement processing, but fails to address how the vertical limiter itself satisfies the claim language of "controller." The entirety of the Petition's analysis of the "controller" aspect of this limitation follows:

Thus, vertical limiter 47 is a *controller* that *controls* luminance contrast enhancer 2 (a *corrector* of limitation 1.c) and its primary mapper 12 (an additional *corrector* of limitation 1.c) by limiting their luminance

contrast enhancement to the scanning lines of the picture area. Specifically, vertical limiter 47 causes the *correctors* to enhance (*correct*) the luminance of the pixels of a scanning line (*video signal*) *when* the scanning line does not contain *pattern portions* (*i.e.*, the scanning line is part of the picture area) and *not to* enhance (*correct*) the luminance of the pixels of a scanning line (*video signal*) *when* the scanning line contains *pattern portions* (*i.e.*, the scanning line is part of the black non-picture bands). *See also* §§ IV.C-E (constructions of this limitation); EX1003, ¶111.

Pet. 48. As shown above, Petitioner provides no evidence that the vertical limiter itself is a “controller” and includes processing circuitry. While the Petition cites to its expert declaration (EX1003), the expert declaration is essentially a word-for-word duplication of the Petition. Such conclusory and superficial attorney argument in the guise of expert testimony cannot serve as sufficient support for Petitioner’s arguments. *See, e.g.,* *Cardiocom, LLC v. Bosch Healthcare Sys., Inc.*, IPR2013-00439, Paper 26, 15-16 (P.T.A.B. Jan. 16, 2014); *see also* *Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, IPR2014-00529, Paper 8, 15-16 (P.T.A.B. Sept. 23, 2014) (“Merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value,” and a petitioner cannot move forward to trial based upon such “mere conclusory statements.” (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006))); *TRW Auto. US LLC v. Magna*

Elecs., Inc., IPR2014-00258, Paper 18, 10-11 (P.T.A.B. Aug. 27, 2014) (giving little to no weight to expert testimony that “did not elaborate on [Petitioner’s] position because it simply repeated [Petitioner’s] conclusory statements verbatim”); *see also InfoBionic, Inc. v. Braemar Mfg., LLC*, IPR2015-01704, Paper 11, 6 (P.T.A.B. Feb. 16, 2016) (denying institution because expert merely repeated the argument in the Petition about what a reference meant without explaining why the expert believed that meaning to be correct).

Similarly to Ground 1, Petitioner and its expert provide no explanation as to how a black box component corresponds to the claimed “controller.” Pointing to two completely different components in different prior art references—without any explanation or evidence—is not a sufficient basis for establishing obviousness.

The Petition fails to address how a vertical limiter satisfies the **controller** aspect recited in limitation [1.d] and thus fails to show how limitation [1.d] is rendered obvious by Fujimura.

2. Petitioner Fails to Establish That Claim 2 Would Have Been Rendered Obvious in View of Fujimura

Claim 2 depends from claim 1. Therefore, for at least the reasons provided above in relation to claim 1 in Ground 1, Petitioner fails to establish that claim 2 would have been rendered obvious based on Fujimura.

3. Petitioner Fails to Establish That Claim 3 Would Have Been Rendered Obvious in View of Fujimura

a. Petitioner Fails to Establish That Claim Limitation [3.b] Would Have Been Rendered Obvious in View of Fujimura

In relation to this limitation, Petitioner merely cites back to limitation [1.b]. Pet. 52. (“Fujimura discloses this limitation. *See* limitation 1.b.”). Therefore, for the reasons provided above in relation to limitation [1.b], Petitioner fails to establish that claim limitation [3.b] would have been rendered obvious in view of Kim.

b. Petitioner Fails to Establish That Claim Limitation [3.e] Would Have Been Rendered Obvious in View of Fujimura

Claim limitation [3.e] recites “a controller which controls the corrector to cause the corrector not to change the correction characteristics in the corrector when the pattern portions are contained.”)”. Petitioner fails to establish that claim limitation [3.e] would be rendered obvious in view of Fujimura. Pet. 56-57.

In relation to this limitation, Petitioner relies on similar rationale to limitation [1.d]. *See* Pet. 45-48, 56-57. Therefore, arguments from limitation [1.d] are incorporated by reference here. *Supra* Section VIII.B.1.b. Similarly to limitation [1.d], Petitioner provides no analysis of how Fujimura discloses or renders obvious the “controller” aspect of the limitation. *See id.*; Pet. 56-57.

Petitioner alleges that the “vertical limiter 47” is the “controller which controls the corrector.” Pet. 56. However, Petitioner and its expert provide no analysis of how the vertical limiter 47 meets the language of “controller” or “controller which controls the corrector.” *See* Pet. 56-57.

As described above in relation to limitation [1.d], under plain and ordinary meaning, a controller comprises at least some sort of processing circuitry, such as a CPU. *See, e.g.*, EX2016, 3 (“[m]icrocontrollers combine the fundamental resources available in a microcomputer such as the CPU, memory, and I/O resources in a single chip”); *see also* EX2016, 4. This is consistent with the description of a controller in the '645 Patent, because the '645 Patent describes that a CPU acts as a controller to cause correction of the video signal input based on when the pattern portions are contained. EX1001, 18:50-61.

Petitioner points to a vertical limiter and a resultant restriction of contrast enhancement processing, but fails to address how the vertical limiter itself satisfies the claim language of “controller.” *See* Pet. 56-57. For example, the Petition fails to address whether the vertical limiter of Fujimura includes processing circuitry as a controller would.

The Petition's only support is a cite to its expert declaration, but the expert declaration is almost a verbatim repetition of what is in the Petition. *See, e.g.*, Pet.

56-57; EX1003 ¶ 132. Such conclusory and superficial attorney argument in the guise of expert testimony cannot serve as sufficient support for Petitioner's arguments. *See, e.g., Cardiocom, LLC v. Bosch Healthcare Sys., Inc.*, IPR2013-00439, Paper 26, 15-16 (P.T.A.B. Jan. 16, 2014); *see also Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, IPR2014-00529, Paper 8, 15-16 (P.T.A.B. Sept. 23, 2014) ("Merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value," and a petitioner cannot move forward to trial based upon such "mere conclusory statements." (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006))); *TRW Auto. US LLC v. Magna Elecs., Inc.*, IPR2014-00258, Paper 18, 10-11 (P.T.A.B. Aug. 27, 2014) (giving little to no weight to expert testimony that "did not elaborate on [Petitioner's] position because it simply repeated [Petitioner's] conclusory statements verbatim"); *see also InfoBionic, Inc. v. Braemar Mfg., LLC*, IPR2015-01704, Paper 11, 6 (P.T.A.B. Feb. 16, 2016) (denying institution because expert merely repeated the argument in the Petition about what a reference meant without explaining why the expert believed that meaning to be correct).

The Petition fails to address how a vertical limiter satisfies the **controller** aspect recited in limitation [3.e] and thus fails to show how limitation [3.e] is rendered obvious by Fujimura. For at least the foregoing reasons, Petitioner fails to

show a reasonable likelihood of success in establishing that claim limitation [3.e] would have been rendered obvious based on Fujimura. Accordingly, the Petition should be denied.

4. Petitioner Fails to Establish That Claim 4 Would Have Been Rendered Obvious in View of Fujimura

Claim 4 depends from claim 1. Therefore, for at least the reasons provided above in relation to claim 1 in Ground 1, Petitioner fails to establish that claim 4 would have been rendered obvious based on Fujimura.

C. Ground 3: Petitioner Fails to Establish That Claims 5-8 Would Have Been Obvious Based on Fujimura and Kim

1. Petitioner Fails to Establish That Claim 5 Would Have Been Rendered Obvious in View of Fujimura and Kim

a. Petitioner Fails to Establish That Claim Limitation [5.b] Would Have Been Rendered Obvious in View of Fujimura and Kim

In relation to this limitation, Petitioner relies on similar rationale as limitation [1.b] in Ground 2. Pet. 62. (“As described for limitation 1.b in Ground 2, letterbox signal detector 46 is a pattern portion detector because it detects the pattern portions described for limitation 1.b in Ground 2 (black non-picture bands above and below the picture area).”). Therefore, for the reasons provided above in relation to Ground 2, limitation [1.b], Petitioner fails to establish that claim limitation [5.b] would have been rendered obvious in view of Fujimura and Kim.

b. Petitioner Fails to Establish That Claim Limitation [5.e.i] Would Have Been Rendered Obvious in View of Fujimura and Kim

Claim limitation [5.e.i] recites “a controller which controls the corrector to cause the corrector to correct the video signal input to the input unit when the pattern portions are not contained and when the pattern portions are the no-picture areas.” Petitioner fails to establish that claim limitation [5.e.i] would be rendered obvious in view of Fujimura and Kim. Pet. 66-67.

In relation to this limitation, Petitioner relies on similar rationale to Ground 2, limitation [1.d]. *See* Pet. 45-48, 66-67. Therefore, arguments from limitation [1.d] are incorporated by reference here. *Supra* Section VIII.B.1.b. Similarly to limitation [1.d], Petitioner provides no analysis of how Fujimura discloses or renders obvious the “controller” aspect of the limitation. *See id.*; Pet. 66-67.

Petitioner alleges that the “vertical limiter 47” is the “controller which controls the corrector.” *Id.* However, Petitioner and its expert provide no analysis of how the vertical limiter 47 meets the language of “controller” or “controller which controls the corrector.” *See id.*

As described above in relation to limitation [1.d], under plain and ordinary meaning, a controller comprises at least some sort of processing circuitry, such as a CPU. *See, e.g.*, EX2016, 3 (“[m]icrocontrollers combine the fundamental resources

available in a microcomputer such as the CPU, memory, and I/O resources in a single chip”); *see also* EX2016, 4. This is consistent with the description of a controller in the '645 Patent, because the '645 Patent describes that a CPU acts as a controller to cause correction of the video signal input based on when the pattern portions are contained. EX1001, 18:50-61.

Petitioner points to a vertical limiter and a resultant restriction of contrast enhancement processing, but fails to address how the vertical limiter itself satisfies the claim language of “controller.” *See* Pet. 66-67. For example, the Petition fails to address whether the vertical limiter of Fujimura includes processing circuitry as a controller would.

The Petition's only support is a cite to its expert declaration, but the expert declaration is almost a verbatim repetition of what is in the Petition. *See, e.g.,* Pet. 66-67, EX1003 ¶¶ 150-51. Such conclusory and superficial attorney argument in the guise of expert testimony cannot serve as sufficient support for Petitioner's arguments. *See, e.g.,* *Cardiocom, LLC v. Bosch Healthcare Sys., Inc.*, IPR2013-00439, Paper 26, 15-16 (P.T.A.B. Jan. 16, 2014); *see also* *Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, IPR2014-00529, Paper 8, 15-16 (P.T.A.B. Sept. 23, 2014) (“Merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value,” and a petitioner

cannot move forward to trial based upon such “mere conclusory statements.” (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *TRW Auto. US LLC v. Magna Elecs., Inc.*, IPR2014-00258, Paper 18, 10-11 (P.T.A.B. Aug. 27, 2014) (giving little to no weight to expert testimony that “did not elaborate on [Petitioner’s] position because it simply repeated [Petitioner’s] conclusory statements verbatim”); *see also InfoBionic, Inc. v. Braemar Mfg., LLC*, IPR2015-01704, Paper 11, 6 (P.T.A.B. Feb. 16, 2016) (denying institution because expert merely repeated the argument in the Petition about what a reference meant without explaining why the expert believed that meaning to be correct).

The Petition fails to address how a vertical limiter satisfies the **controller** aspect recited in limitation [5.e.i] and thus fails to show how limitation [5.e.i] is rendered obvious by Fujimura. Further, as described above in relation to the claim construction sections, Petitioner advances unclear and inconsistent claim constructions of this term. *See supra* Section IV.B. Petitioner’s construction, as applied, here, is inconsistent with its interpretation of a similar term in relation to Ground 2. *See id.* This alone warrants denial.

c. Petitioner Fails to Establish That Claim Limitation [5.e.ii] Would Have Been Rendered Obvious in View of Fujimura and Kim

Claim limitation [5.e.ii] recites “a controller which . . . which controls the

corrector to cause the corrector not to correct the video signal when the pattern portions are not the no-picture areas.” Petitioner fails to establish that claim limitation [5.e.ii] would be rendered obvious in view of Fujimura and Kim. Pet. 67-71.

After relying on Fujimura to disclose the other limitations of claim 5, Pet. 59-67, Petitioner then alleges that “a POSITA would have been motivated to add Kim’s functionality to Fujimura to account for such patterns for which Fujimura does not account.” Pet. 71.

Kim is directed to the classification of an entire input image as a “pattern- like image” or a “normal image.” *See, e.g.*, EX1004 ¶ [0039] (“One can conclude that the input image is most likely a pattern-like image as the value of the pattern-like image detection parameter r approaches 1 and that the input image is most likely a normal image as the value of the pattern-like image detection parameter r approaches 0.”); *see also supra* Section VIII.A.1.a. On the other hand, Fujimura is directed to outputting the starting and ending lines of a picture portion when a video signal is a letterbox signal. *See* EX1005, 13:50-58. Contrast enhance operations can then be “restricted to the area between the starting and ending lines of the picture area.” *See id.* at 14:50-59. In other words, Fujimura teaches identifying boundaries to restrict correction in a single frame, while Kim teaches classifying an entire frame as either

“pattern-like” or “normal” to determine when to apply image enhancement.

Petitioner's combination fails because it presupposes that either Kim or Fujimura distinguishes between pattern portions that are no-picture areas and pattern portions that are not the no-picture areas. Limitation [5.e.ii] requires different actions based on whether “the pattern portions are the no-picture areas” and “when the pattern portions are not the no-picture areas.” The Petition fails to provide any evidence that Kim or Fujimura provides this type of functionality. Pet. 67-71.

For at least the foregoing reasons, Petitioner fails to show a reasonable likelihood of success in establishing that claim limitation [5.e.ii] would have been rendered obvious based on Fujimura and Kim. Accordingly, the Petition should be denied.

2. Petitioner Fails to Establish That Claims 6-8 Would Have Been Rendered Obvious in View of Fujimura and Kim

Claims 6-8 depend from claim 5. Therefore, for at least the reasons provided above in relation to claim 5, Petitioner fails to establish that claims 6-8 would have been rendered obvious based on Fujimura and Kim.

IX. CONCLUSION

For at least the foregoing reasons, the Board should deny institution of the Petition.

Case IPR2025-01312
Patent No. 7,952,645
Patent Owner's Preliminary Response

Dated: December 5, 2025

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Case IPR2025-01312
Patent No. 7,952,645
Patent Owner's Preliminary Response

CERTIFICATE OF SERVICE

I hereby certify that on this 5th day of December, 2025, a copy of the attached **PATENT OWNER'S PRELIMINARY RESPONSE** was served by electronic mail to the attorneys of record, at the following addresses:

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Case IPR2025-01312
Patent No. 7,952,645
Patent Owner's Preliminary Response

CERTIFICATION PURSUANT TO 37 C.F.R. § 42.24(d)

Pursuant 37 CFR 42.24(d), the undersigned certifies that this Preliminary Response and complies with the type-volume limitation of 37 CFR § 42.24(a). The word count application of the word processing program used to prepare this Patent Owner's Preliminary Response indicates that the Preliminary Response contains 10,816 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

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