

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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POLYCOM, INC.,  
Petitioner,

v.

FULLVIEW, INC.,  
Patent Owner.

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Case IPR2019-00647  
Patent 6,128,143

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Before DONNA M. PRAISS, NEIL T. POWELL, and  
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Polycom, Inc. (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–3 and 10–12 of U.S. Patent No. 6,128,143 (“the ’143 patent,” Ex. 1001). Paper 1 (“Pet.”). FullView, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”).

Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314; *see* 37 C.F.R. § 42.4. After considering the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail with respect to at least one claim challenged in the Petition. Accordingly, we deny the Petition, and do not institute an *inter partes* review for the reasons discussed below.

### A. *Related Proceedings*

The parties represent that the ’143 patent is being asserted in *FullView, Inc. v. Polycom, Inc.*, before the U.S. District Court of the Northern District of California in Civil Action No. 3:18-cv-00510-EMC. Pet. 1; Paper 6, 2.

### B. *The ’143 patent*

The ’143 patent, titled “Panoramic Viewing System with Support Stand,” explains that when several views are obtained from cameras having different optical centers, irregularities are introduced requiring a large

amount of computational power and time to form interpolated views.  
Ex. 1001, 1:42–63. The '143 patent describes a panoramic viewer having multiple cameras arranged to form a continuous 360 degree view of an area and positioned so that each camera views a different reflective surface of a solid or hollow polyhedron, such as a solid or hollow pyramid, resulting in each camera having a virtual optical center positioned within the pyramid. *Id.* at 1:66–2:20. Figure 2 of the '143 patent reproduced below illustrates a four camera system for providing a 360 degree view to a user having a nearly common virtual optical center at position 90 within pyramid 40. *Id.* at 3:53–4:38.

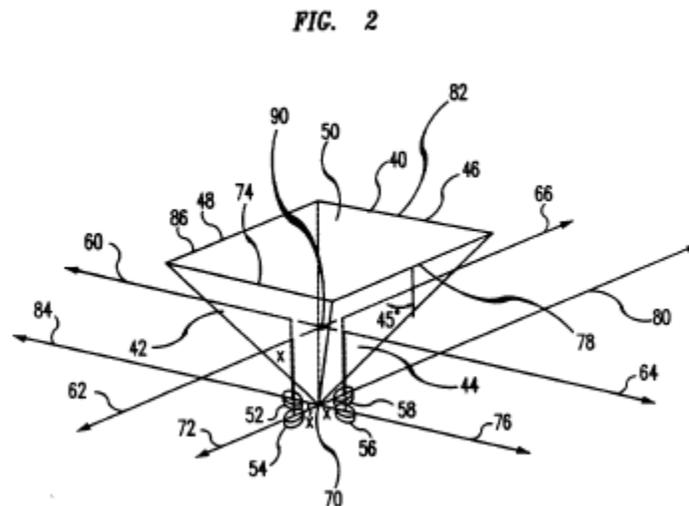


Figure 2 shows a panoramic viewing system having a four-sided pyramid with reflective surfaces 48, 42, 44, and 46 associated with four cameras 52, 54, 56, and 58, respectively. *Id.* at 3:1–3, 60–62. According to the '143 patent, base 50 and vertex 70 of the pyramid configuration do not have to be physically present and can be thought of as conceptual aids such as a base plane or end and a vertex point or end. *Id.* at 4:44–47.

The '143 patent also discloses supporting the pyramid by a post that passes through the vertex of the pyramid and also mounting cameras to the post to provide a panoramic viewer with a mounting structure and a structure supporting individual cameras. *Id.* at 2:24–28. Figure 17 from the '143 patent reproduced below illustrates a panoramic viewer embodiment with a structural support. *Id.* at 3:34.

FIG. 17

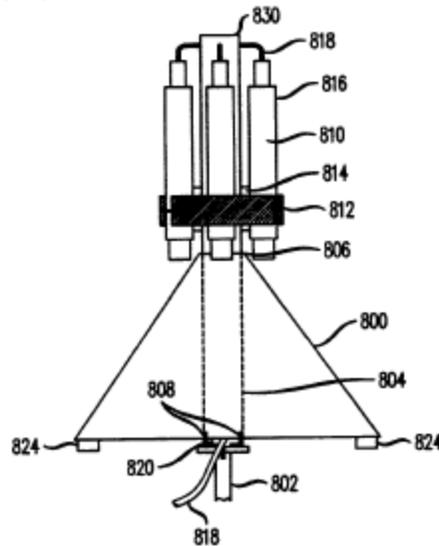


Figure 17 depicts stand 802 and support member 804 for supporting a panoramic viewer. *Id.* at 11:54–60. Reflective viewer 800 is secured to support member 804 at vertex end 806. *Id.* at 11:56–57. Support member 804 is a hollow tube that has an opening at end 830 for passing cables through. *Id.* at 11:55–12:6. Hollow tube 804 extends beyond vertex end 806 of reflective pyramid so that cameras may be supported by tube 804, which are mounted to tube 804 by strap or belt 812. *Id.* at 11:56–62. Hollow tube 804 is secured to stand 802 by angle brackets 808. *Id.* at 11:57–58. Alternatively, rubber stands or feet 824 provided at the base end of reflective pyramid 800 may be used in place of post 802. *Id.* at 12:8–11.

*C. Challenged Claims*

Petitioner challenges claims 1–3 and 10–12 (“the challenged claims”) of the ’143 patent. Claims 1 and 10 are independent; claim 1 is representative of the challenged claims, and is reproduced below.

1. A panoramic viewing apparatus, comprising:
  - a plurality of image processing devices, each having an optical center and a field of view;
  - a reflective element being at least partially polyhedral having a plurality of reflective facets facing in different directions, each of at least two of the plurality of reflective facets redirecting a field of view of one of the plurality of image processing devices to create a plurality of virtual optical centers; and
  - a support member intersecting an inner volume of the reflective element, the reflective element being secured to the support member and the plurality of image processing devices being secured to the support member.*

Ex. 1001, 14:62–15:8 (emphasis added to highlight disputed limitation). Independent claim 10 further requires that the reflective element is “pyramid shaped.” *Id.* at 16:23.

*D. The Asserted Grounds of Unpatentability*

Petitioner challenges the patentability of the claims under 35 U.S.C. § 102(b)<sup>1</sup> as follows:

Claims 1, 2, 10, and 11 as anticipated by Yamazawa;<sup>2</sup> and

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<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2012. Because the application for the patent at issue in this proceeding has an effective filing date before that date, we refer to the pre-AIA versions of the statute.

<sup>2</sup> Kazamasa Yamazawa et al., *High-resolution Omnidirectional Stereo Imaging Sensor Using Pyramidal Mirrors*, 1997 General Conference of the

Claims 1–3 and 10–12 as anticipated by Iwerks.<sup>3</sup>

Petitioner also challenges the patentability of the claims under 35 U.S.C. § 103 as follows:

Claims 3 and 12 over Yamazawa and Horn;<sup>4</sup>

Claims 2 and 11 over Iwerks and Yamazawa; and

Claims 1–3 and 10–12 over Nalwa<sup>5</sup> and Horn.

Pet. 3. Petitioner relies on the Declaration of Dr. Stephen D. Fantone (Ex. 1002) in support of its contentions. Patent Owner relies on the Declaration of Dr. Vishvjit S. Nalwa (Ex. 2002) in support of its Preliminary Response.<sup>6</sup>

## II. ANALYSIS

### *A. Person of Ordinary Skill in the Art*

Petitioner contends that a person having ordinary skill in the art would have had “a Bachelor’s degree in physics or electrical engineering, or an equivalent degree, and at least two years of experience in the design of

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Institute of Electronics, Information and Communication Engineers 353 (1997) (Ex. 1004). Citations herein are to the certified English translation included as Exhibit 1004. Patent Owner does not challenge the accuracy of the translation nor the use of Yamazawa as prior art to the ’143 patent under 35 U.S.C. § 102(b). *See* Pet. 10 (asserting that “Yamazawa was available to the public no later than the conclusion of the conference on March 27, 1997” and “more than one year before the August 28, 1998 filing date of the ’143 patent”).

<sup>3</sup> U.S. Patent No. 3,118,340, issued Jan. 21, 1964.

<sup>4</sup> U.S. Patent No. 5,065,249, issued Nov. 12, 1991.

<sup>5</sup> European Patent Application Publication No. 0 740 177 A2, published Oct. 30, 1996.

<sup>6</sup> Dr. Nalwa is the named inventor on the ’143 patent (Ex. 1001, at [75]; Ex. 2002 ¶ 1) and a founder of the Patent Owner (Ex. 2002 ¶ 4).

optical systems.” Pet. 15–16. Patent Owner does not dispute the level of skill articulated by Petitioner.

For purposes of this Decision, we adopt Petitioner’s proposed level of ordinary skill in the art. We also consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

*B. Prosecution History of the ’143 patent*

The ’143 patent issued from U.S. Patent Application No. 09/141,883. Ex. 1001, at [21]. In the first Office Action dated August 13, 1999 (Ex. 1003, 165–174), pending claims 4–9 and 13–18 were allowed and pending claims 1–3 and 10–12 were rejected. Independent claims 1 and 10 were rejected as being obvious over Nalwa ’483 (U.S. Patent No. 5,539,483) in view of Herndon (U.S. Patent No. 3,740,469), claim 1 was also rejected as anticipated by Herndon, and independent claim 10 was rejected as obvious over the Herndon in view of Yamazawa 1993 (Kazamasa Yamazawa et al., *Omnidirectional Imaging with Hyperboloidal Projection*, 1993 IEEE Int’l Conference, Yokohama, Japan, 1029–1033, July 26–30, 1993). *Id.* at 167, 169, 172.

With respect to claim 1, the Examiner stated that Herndon discloses “a support system having a post which is able to extend into the inner of the reflective element” and a “plurality of image processing elements are attached to the support system.” *Id.* at 167–168. With respect to claim 10, the Examiner stated that “Herndon does not clearly teach that the shape of the reflective element is a pyramid shape” however it would have been obvious to a skilled artisan to use a reflective element having a pyramid

shape as disclosed by Yamazawa 1993 for guiding light from a panoramic field to a plurality of image gathering elements. *Id.* at 170. Regarding the rejection of both independent claims 1 and 10 over the combination of Nalwa '483 and Herndon, the Examiner found that the only claimed feature missing from Nalwa '483's disclosure was the support system for supporting the reflective element and the image processing elements, which the Examiner determined would have been obvious in view of the support post suggested by Herndon. *Id.* at 172.

On February 23, 2000, the Applicant filed a Response (*id.* at 301–303) arguing that Herndon does not disclose “a support member intersecting an inner volume of a reflective element” as recited in claim 1 nor “a support member intersecting an inner volume of a pyramid shaped element” as recited in claim 10. *Id.* at 302. Applicant explained that Herndon's support member does not intersect an inner volume, but, rather, that Herndon's support member makes contact with the reflective element. *Id.* at 301–302. Applicant also argued that the deficiency of Herndon was not cured by the other prior art references cited by the Examiner. *Id.* at 302.

In response to that Amendment, a Notice of Allowability was mailed on May 8, 2000. *Id.* at 350–352.

### *C. Claim Construction*

In an *inter partes* review filed after November 13, 2018, we construe claim terms according to the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2018). Under *Phillips*, claim terms are afforded “their ordinary and customary meaning.” *Phillips*, 415 F.3d at 1312. “[T]he ordinary and

customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. “Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

Petitioner proposes a construction for the term, “pyramid shaped element” which is recited in claims 10 and 11. Pet. 15. Petitioner provides citations to the Specification to support the proposed meaning of “an element with three or more sides, excluding the base.” *Id.* (citing Ex. 1001, 5:30–31, 5:36–38). Patent Owner does not dispute Petitioner’s proposed construction for the term “pyramid shaped element,” but, rather, contends that the term “a support member intersecting an inner volume of the reflective element” (claim 1) or “a support member intersecting an inner volume of the pyramid shaped element” (claim 10) is the “crux of the disagreement” between the parties. Prelim. Resp. 7. According to Patent Owner, the words “inner volume” were emphasized during prosecution and would be construed by a person having ordinary skill in the art as “a ‘non-peripheral volume’ of the ‘reflective element.’” *Id.* at 8–9 (quoting Ex. 2002 ¶ 35). Patent Owner argues that “[e]very ‘inner volume’ of a ‘reflective element’ is within the volume bounded by all [of] its reflective facets, as in Figure 17 of the ’143 [patent]” such that the “support member” is above a plane touching all of the “reflective” facets and “reach[es] in” to the interior of these reflective facets. *Id.* at 10–11 (quoting Ex. 2002 ¶ 36). Stated another way, Patent Owner contends that the term “requires more than, and

is not satisfied by, the mere showing of ‘a support member making contact with a reflective element.’” *Id.* at 9 (quoting Ex. 1003, 301–302).

After reviewing the parties’ arguments and evidence, we determine that only the term “a support member intersecting an inner volume of a reflective [or pyramid shaped] element” of the ’143 patent requires express construction for purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). On the present record, including considering the prosecution history, we agree with Patent Owner that the disputed claim term is not satisfied by a support member making peripheral contact with a reflective or pyramid shaped element because “intersecting an inner volume” requires an intersection of the support member through a volume of space defined and bounded by the reflective element. *See Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017) (en banc), (“The PTO should also consult the patent’s prosecution history in proceedings in which the patent has been brought back to the agency for a second review”); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc) (citations omitted) (A patent’s prosecution history “consists of the complete record of the proceedings before the [US]PTO,” and “provides evidence of how the [US]PTO and the inventor understood the patent.”).

*D. Petitioner's Arguments*

*1. Anticipation by Yamazawa*

Regarding independent claims 1 and 10, Petitioner argues that Yamazawa discloses all of the claimed features including two hexagonal pyramidal mirrors or reflective elements secured to a vertical support member that intersects the inner volume of each mirror in addition to corresponding cameras or image processing devices secured to the vertical support member above and below each mirror. Pet. 20, 24–25 (citing Ex. 1004, Fig. 1; Ex. 1002 ¶¶ 54–56, 65–67). Yamazawa's Figure 1 as annotated by Petitioner is reproduced below.

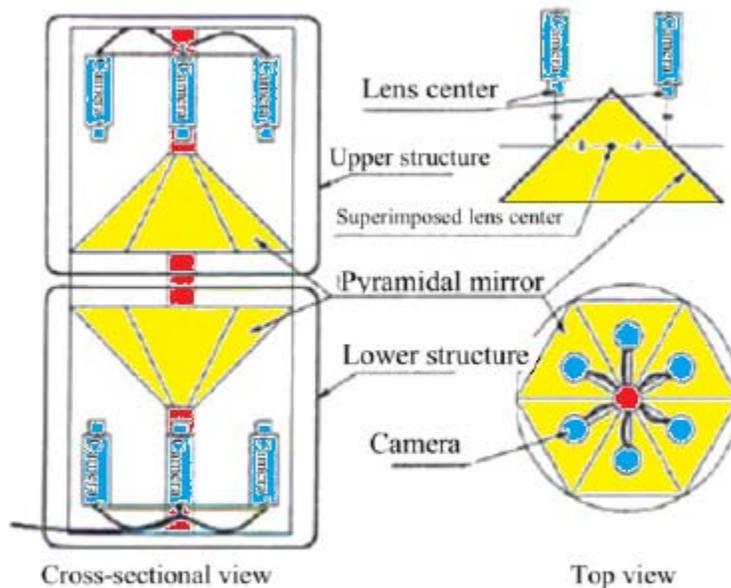


Fig. 1 Structure of omnidirectional stereo image sensor

Yamazawa's Figure 1 is annotated to highlight the pyramidal mirrors in yellow, the vertical support member in red, and the camera in blue. *Id.* at 20, 24. Petitioner notes that the term "pyramid shaped element" recited in independent claim 10 means "an element with three or more sides, excluding

the base” consistent with the Specification’s description of a pyramid having three reflective sides and also “more or less [than four] reflective sides.” *Id.* at 15 (citing Ex. 1001, 5:30–31, 36–38, Figs. 2–6, 11–13, 17).

Based on our review of the current record, we agree with Patent Owner that Yamazawa does not describe the element highlighted in red by Petitioner as intersecting the pyramidal mirror elements highlighted in yellow by Petitioner. In particular, Petitioner does not adequately explain why a person having ordinary skill in the art would understand the vertical lines highlighted in red to intersect an inner volume of Yamazawa’s reflective pyramidal mirror. Yamazawa does not describe such an arrangement in its text, and Yamazawa’s “cross-sectional view” in annotated Figure 1 above does not disclose the presence of the alleged support internal to the reflective element with either continued lines or dotted lines through the pyramidal mirrors highlighted in yellow by Petitioner. Therefore, Yamazawa is ambiguous as to how it is supported. *See Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017) (“Ambiguous references do not anticipate a claim.”).

Petitioner’s conclusory assertion that Yamazawa’s Figure 1 shows “a vertical support member . . . that intersects the inner volume of each mirror” (Pet. 20) is not supported by the record. Petitioner cites paragraphs 54–56 of the Fantone Declaration as support for Yamazawa teaching this element of claim 1. Pet. 20. Paragraph 54 of the Fantone Declaration quotes from column 11 of the ’143 patent, which describes support member 804 being a hollow tube in Figure 17. Ex. 1002 ¶ 54. Paragraph 55 of the Fantone Declaration asserts that Yamazawa’s Figure 1 is “similar” to Figure 17 of the ’143 patent; however, the Declaration provides nothing more than a

restatement of the same assertion in the Petition, namely that Yamazawa's Figure 1 "shows . . . a vertical support member . . . that intersects the inner volume of each mirror." Ex. 1002 ¶ 55. Neither the Petition nor the Fantone Declaration addresses the difference between Yamazawa's Figure 1 and the '143 patent's Figure 17, most notably that Figure 17 of the '143 patent depicts a support (804) with dotted lines inside reflective pyramid (800) and Yamazawa's Figure 1 does not. *Compare* Ex. 1001, Fig. 17, 11:54–57 with Ex. 1004, Fig. 1; Prelim. Resp. 14–15. Paragraph 56 summarily states "[t]hus, in my opinion, Yamazawa teaches this element of claim 1." *Id.* ¶ 56.

The Fantone Declaration, therefore, is of little probative value regarding Yamazawa's alleged support "intersecting an inner volume" of the reflective element as required by each of the challenged claims. *See* 37 C.F.R. § 42.65(a) (opinion testimony that does not disclose underlying facts or data "is entitled to little or no weight"); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985) (a lack of objective support for expert opinion "may render the testimony of little probative value in a validity determination").

Without a sufficient basis to find the alleged support intersects Yamazawa's pyramidal mirrors, Yamazawa's reflective element at most contacts a support member. However, as explained above, this does not satisfy the claim's requirement that the support member "intersect[] an inner volume" of the reflective element. Accordingly, Petitioner has not

demonstrated a reasonable likelihood that claim 1 of the '143 patent is anticipated by Yamazawa.

Petitioner relies on the same arguments and evidence for this claim element in connection with independent claim 10 and dependent claims 2 and 11 as well. Pet. 21, 24–25 (citing Ex. 1004, Fig. 1; Ex. 1002 ¶ 66). Therefore, Petitioner has not demonstrated a reasonable likelihood that any of claims 2, 10, and 11 are anticipated by Yamazawa for the same reasons discussed above for claim 1.

## *2. Anticipation by Iwerk*

Petitioner asserts that Iwerk discloses all of the limitations of independent claims 1 and 10. Pet. 31–36, 40–45. Petitioner contends that Iwerk's cylindrical support 14 can be considered the claimed support member, which is secured to cameras 11 and to inverted frusto-conical support 25, which, together with walls 26, ribs 27, and seats 28 and 29, Petitioner asserts form the claimed reflective element. *Id.* at 35–36. Petitioner notes that Iwerk's mirrors 31 are mounted against seats 28 and 29 at the top and bottom of walls 26 and that inverted frusto-conical support 25 is mounted upon the top of support 14. *Id.* at 34 (citing Ex. 1005, 2:16–22). According to Petitioner, support 14 (highlighted in yellow) intersects an inner volume of the reflective element (highlighted in blue) as shown in Iwerk's annotated Figure 2 reproduced below. *Id.* at 35–36.

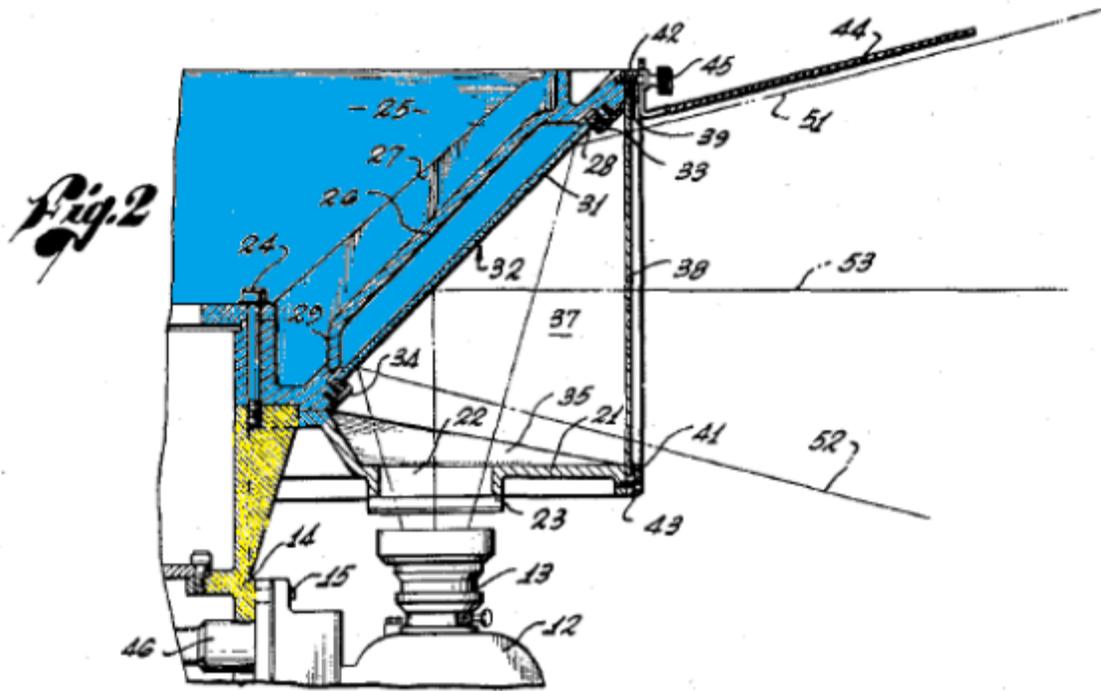


Figure 2 of Iwerk is a partial sectional view of the motion picture camera assembly shown in Figure 1 along line 2-2. Ex. 1005, 1:57-61. Figure 1 of Iwerk is reproduced below.

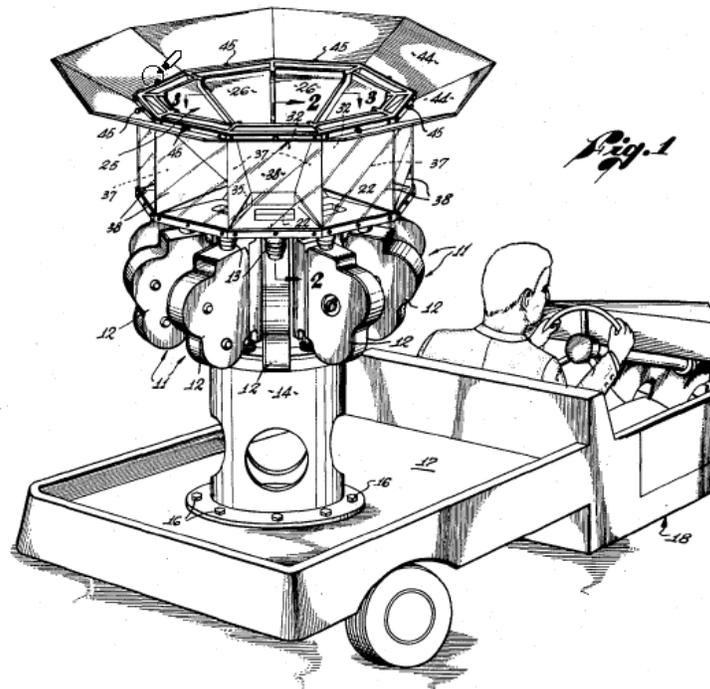


Figure 1 of Iwerk illustrates a plurality of cameras 11 having main body portions 12 and lens holders 13 mounted and spaced about the upper surface of vertically disposed, cylindrical support 14. *Id.* at 1:69–2:3.

Based on our review of the current record, we agree with Patent Owner that, even if Iwerk’s partitioned mirrors were to be considered a reflective element that is “at least partially polyhedral” or “pyramid shaped,” Petitioner has not shown that Iwerk’s Figure 2 depicts a support intersecting an inner volume of the reflective element. Prelim. Resp. 16–23. As discussed above, a support member is not “intersecting an inner volume of a reflective element” in a panoramic viewing system if the support member merely makes contact with the reflective element.

Petitioner first identifies Iwerk’s cylindrical support 14 and inverted frusto-conical support 25 together as the claimed support. Pet. 34–35, 44. However, Petitioner also identifies inverted frusto-conical support 25 as connecting Iwerk’s mirrors 31 to form the claimed reflective element. *Id.* at 31–32, 41. The Petition does not adequately explain how Iwerk’s reflective element defines a volume that is intersected by a support member as required by independent claim 1. Stated another way, the Petition does not identify an intersection between Iwerk’s alleged support and any particular inner volume defined by or bounded by Iwerk’s reflective member. For example, even if we were to find that frusto-conical support 25, as part of the alleged “support member,” lies inside the collection of mirrors 31 (*see id.* at 35), we would not find that support 25 intersects a volume of space defined and bounded by the “reflective element,” as frusto-conical support 25 is part of the reflective element, not inside it (*see id.* at 31–32).

Alternatively, Petitioner identifies Iwerk's cylindrical support 14 alone as the claimed support member. Pet. 35–36, 44–45. Either way, Iwerk's inverted frusto-conical support 25 is identified by Petitioner as part of the reflective element which, in turn, is connected to support 14. As Patent Owner points out, Iwerk's "annulus 21" is "[i]ntegrally mounted at the upper end of the support 14" rather than integrally mounted to the portion identified by Petitioner with the color blue as the reflective element. Prelim. Resp. 22–23 (citing Ex. 2002 ¶ 46); Prelim. Resp. 17 (quoting Ex. 1005, 2:11–13). Moreover, Petitioner has not shown that Iwerk's structure of a reflective element connected to a support is materially different compared to Herndon's attachment of reflective element 56 to an underlying support, which structure was overcome during prosecution of the '143 patent. *Compare* Ex. 1005, Fig. 2 *with* Ex. 2003, Fig. 10. Accordingly, the Petition fails to show sufficiently that cylindrical support 14 intersects a volume of space defined and bounded by the frusto-conical support 25, as required by the claim.

Accordingly, Petitioner has not demonstrated a reasonable likelihood that claim 1 of the '143 patent is anticipated by Iwerks.

Petitioner relies on the same arguments and evidence for this claim element in connection with independent claim 10 and dependent claims 2, 3, 11, and 12 as well. Pet. 36–49 (citing Ex. 1005, 2:1–5, 2:20–22, Fig. 2; Ex. 1002 ¶ 106). Therefore, Petitioner has not demonstrated a reasonable likelihood that any of claims 2, 3, 10, 11, and 12 are anticipated by Iwerks for the same reasons discussed above for claim 1.

3. *Obviousness over Nalwa and Horn*

Petitioner contends that the apparatus of claims 1–3 and 10–12 is disclosed or suggested by the combination of Nalwa and Horn. Pet. 54–72. Nalwa is characterized as an earlier disclosure by the inventor of the ’143 patent that is included in the ’143 patent, including Figures 1–10 which illustrate polyhedral structures. *Id.* at 54–56. Petitioner acknowledges that Nalwa, however, does not disclose the claimed support member. *Id.* at 56. Petitioner asserts that it would have been obvious to a person having ordinary skill in the art to modify Nalwa with the portable handheld support boom for a video camera disclosed by Horn because the absence of a support in Nalwa “would make it difficult for a device to keep the mirror and cameras in a fixed position relative to each other.” *Id.* at 56–57 (citing Ex. 1002 ¶ 125).

Petitioner asserts that a person having ordinary skill in the art would have been motivated to use a hollow support shaft for mounting the components of Nalwa because Nalwa describes using as many as eight cameras and it would be beneficial for the cameras’ wires to be enclosed in a compact manner to avoid entanglement and damages to the wires. *Id.* at 58 (citing Ex. 1002 ¶ 125). According to Petitioner, it would have been obvious to secure the mirror of Nalwa to Horn’s support shaft such that the shaft intersects an inner volume of the mirror because the arrangement “would be more likely to keep the mirror (and cameras) of Nalwa secured to the support shaft without interfering with the field of view.” *Id.* at 61–62, 68–69 (citing Ex. 1002 ¶¶ 132, 148).

Based on the record before us, Petitioner does not show sufficiently that a skilled artisan would have had reason to intersect an inner volume of

Nalwa's panoramic viewer with Horn's support shaft. Neither the Petition nor the Fantone Declaration adequately explains why a skilled artisan would have arranged the combined teachings of Nalwa and Horn such that Horn's support intersects an inner volume of Nalwa's reflective element rather than connect Nalwa's viewer to Horn's support at the top of the support as shown in Horn's Figure 1. Petitioner's rationale that it would have been obvious to secure Nalwa's panoramic viewer to Horn's shaft in a manner that would not interfere with the field of view does not explain why it would have been obvious to position the reflective element in the claimed manner relative to Horn's support rather than on the top surface of the support. In addition, both Horn and Herndon illustrate connecting devices to the top surface of a support. Ex. 1007, Fig. 1; Ex. 2003, Fig. 10. For this reason, Petitioner's challenge to the patentability of claim 1 over the combination of Nalwa and Horn is cumulative to the rejection over Herndon based on the connection between the reflective element and the support.

Accordingly, Petitioner has not demonstrated a reasonable likelihood that claim 1 of the '143 patent would have been obvious over the combination of Nalwa and Horn.

Petitioner relies on the same arguments and evidence for this claim element in connection with independent claim 10 and dependent claims 2, 3, 11, and 12 as well. Pet. 62–72 (citing Ex. 1007, Abstract, 1:5–7, 3:10–31, Figs. 1–3; Ex. 1006, 1:53–2:10; Ex. 1002 ¶ 148). Therefore, Petitioner has not demonstrated a reasonable likelihood that any of claims 2, 3, 10, 11, and 12 would have been obvious over the combination of Nalwa and Horn for the same reasons discussed above for claim 1.

4. *Obviousness over Yamazawa and either Horn or Iwerks*

Petitioner additionally asserts that claims 3 and 12, which depend from claims 1 and 10 and require that the support member is hollow, would have been obvious over the combination of Yamazawa's panoramic viewer with Horn's portable handheld support boom for a video camera that can be hollow for cables to optionally be located. Pet. 27–30. Petitioner contends that a skilled artisan would have been motivated to modify Yamazawa with Horn's shaft because it would have been beneficial for the wires associated with the many cameras used by Yamazawa to be enclosed in a compact manner and avoid entanglement and damages to the wires. *Id.* at 28–29, 30.

Because Petitioner's arguments are based on the assertion that “Yamazawa teaches all the limitations of claim 1” (Pet. 27), we determine that Petitioner has not demonstrated a reasonable likelihood that dependent claims 3 and 12 would have been obvious over the combination of Yamazawa and Horn for the reasons discussed above in connection with claim 1. Specifically, Petitioner has not shown sufficiently that Yamazawa discloses “a support member intersecting an inner volume” of a reflective or pyramid shaped element as required by each of the claims.

Petitioner also asserts that claims 2 and 11, which depend from claims 1 and 10 and recite “the plurality of image processing devices are secured to a portion of the support member extending out from [the reflective element (claim 2) or the pyramid shaped element (claim 11)],” if not anticipated by Iwerks would have been obvious over Iwerks in view of Yamazawa. Pet. 49–54. Petitioner contends that Yamazawa's cameras shown in annotated Figure 1 are secured to a portion of the vertical support member (highlighted in red) and extend upward and downward or out from the dual

hexagonal pyramidal mirrors (highlighted in yellow). *Id.* at 50. According to Petitioner, each of Yamazawa’s cameras “must be positioned and secured a certain distance away (or ‘out’) from the mirror in the upward or downward direction” as a “practical matter” to properly capture an external image on the pyramidal mirror. *Id.* at 51 (citing Ex. 1004; Ex. 1002 ¶ 119). Petitioner asserts that the motivation to modify the existing cylindrical support of Iwerks to include a portion extending downward or out from the inverted frusto-conical support 25 and mirrors 31 “would be a straightforward application of well-known optical design practices.” *Id.* at 52 (citing Ex. 1002 ¶ 120).

Petitioner has not demonstrated a reasonable likelihood that dependent claims 2 and 11 would have been obvious over the combination of Iwerk and Yamazawa because the modification to Iwerk’s device does not cure the deficiencies of Iwerk discussed above in connection with claim 1. Specifically, Petitioner has not shown sufficiently that Iwerk discloses “a support member intersecting an inner volume” of a reflective or pyramid shaped element as required by each of the claims.

5. *35 U.S.C. § 325(d)*

Patent Owner contends that the Board should exercise its discretion under 35 U.S.C. § 325(d) to decline to institute review because Petitioner’s challenges rely on the same or substantially the same prior art and arguments that were already considered during the prosecution of the ’143 patent. Prelim. Resp. 1–7, 32.

In view of our determination that Petitioner has failed to show a reasonable likelihood that at least one challenged claim of the ’143 patent is

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unpatentable over the prior art of record, we need not address Patent Owner's arguments under 35 U.S.C. § 325(d).

### III. CONCLUSION

For the foregoing reasons, Petitioner has not demonstrated a reasonable likelihood that at least one challenged claim of the '143 patent is unpatentable over the prior art of record. Accordingly, we do not institute *inter partes* review of the '143 patent.

### IV. ORDER

In consideration of the foregoing, it is hereby  
ORDERED that the Petition is *denied* and no *inter partes* review is instituted.

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PETITIONER:

Robert C. Mattson  
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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POLYCOM, INC.,  
Petitioner,

v.

FULLVIEW, INC.,  
Patent Owner.

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Case IPR2019-00647  
Patent 6,128,143

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Before DONNA M. PRAISS, NEIL T. POWELL, and  
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION  
Denying Petitioner's Request for Rehearing  
*37 C.F.R. § 42.71*

## I. INTRODUCTION

Polycom, Inc. (“Petitioner”) filed a request for rehearing (Paper 13, “Rehearing Request”) of the Board’s decision (Paper 12, “Decision”) denying an *inter partes* review of U.S. Patent No. 6,128, 143 (“the ’143 patent,” Ex. 1001).

## II. ANALYSIS

When rehearing a decision on petition, the Board reviews the decision for an abuse of discretion. 37 C.F.R. § 42.71(c). The party requesting rehearing bears the burden of showing an abuse of discretion, and “[t]he request must specifically identify all matters the party believes the Board misapprehended or overlooked.” 37 C.F.R. § 42.71(d).

We determined in the Decision that Petitioner did not demonstrate a reasonable likelihood that any of the challenged claims are unpatentable as anticipated by or obvious over the cited prior art references, particularly with respect to the claim requirement in the independent claims that a support member “intersect[] an inner volume” of reflective elements secured to a vertical support. Decision at 11–21. Petitioner’s Rehearing Request asserts that we misapprehended or overlooked the argument that dependent claims 3 and 12 would have been obvious over the combination of Yamazawa and Horn because our Decision addresses the failure of Yamazawa to disclose or suggest the support member intersecting an inner volume and does not address the arguments pertaining to Horn’s hollow shaft. Rehearing Request at 2–7. We did not overlook Petitioner’s arguments with respect to Horn and the modification of Yamazawa with Horn. *See* Decision at 20 (“Petitioner contends that a skilled artisan would have been motivated to modify Yamazawa with Horn’s shaft because it would have been beneficial

for the wires associated with the many cameras used by Yamazawa to be enclosed in a compact manner and avoid entanglement and damages to the wires.”). The problem with Petitioner’s argument in both the Petition and the Rehearing Request is that Horn was not relied upon for teaching the claim element of the support member intersecting an inner volume of reflective elements. Petitioner emphasizes that Horn teaches a single hollow shaft (Rehearing Request at 5–7); however, Petitioner does not direct us to any evidence that it would have been obvious to configure the hollow shaft of Horn such that it *intersects an inner volume* of the reflective elements of Yamazawa as required by the independent claims from which claims 3 and 12 depend.

Petitioner’s Rehearing Request makes new arguments not made in the Petition, specifically, that the difference between Iwerks and Herndon, which was distinguished during prosecution of the ’143 patent, is that Iwerks’ cylindrical support 14 does not merely contact the reflective element, but also intersects an inner volume of the reflective element. Rehearing Request at 14–15. Petitioner also relies on case law, such as *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) and *Ex parte Weideman*, Appeal 2008-003454 (BPAI Jan. 27, 2009), that was not cited or relied upon in its brief. Rehearing Request at 8–9. Further, in support of its Rehearing Request, Petitioner submits multiple enlarged and annotated Figures from Iwerks and Herndon, which were not previously before us as part of the Petition. We could not have misapprehended or overlooked arguments or evidence not before us. *See* 37 C.F.R. 42.71(d). A request for rehearing is not an opportunity to supplement an initial filing and make arguments a party did not make earlier.

In any event, even considering Petitioner's Rehearing Request and the new arguments and demonstrative evidence submitted by Petitioner, we determine that the portion of Iwerks' yellow-colored support structure 14 does not "intersect" a volume formed by blue-colored reflective element 56 simply because it is allegedly "inside" element 56. As explained in our Decision, the term "support member intersecting an inner volume of a reflective [or pyramid shaped] element" recited in the '143 patent claims is not satisfied by a support member making peripheral contact with a reflective or pyramid shaped element. Decision at 10. This disputed claim term was not defined in the Petition and, to the extent that Petitioner's Rehearing Request seeks to construe "intersecting" to mean "inside," Petitioner does not adequately explain why the term should be so broadly construed in light of the prosecution history of the '143 patent.

### III. CONCLUSION

For the foregoing reasons, Petitioner has not shown an abuse of discretion in the decision concluding that Petitioner failed to demonstrate a reasonable likelihood that at least one challenged claim of the '143 patent is unpatentable over the prior art of record.

### IV. ORDER

In consideration of the foregoing, it is hereby ORDERED that Petitioner's request for rehearing is *denied*.

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Patent 6,128,143

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