

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CORETRONIC CORPORATION AND OPTOMA CORPORATION,
Petitioners,

v.

MAXELL, LTD.,
Patent Owner

Case: IPR2025-00477

U.S. Patent No. 7,850,313

**PATENT OWNER PRELIMINARY RESPONSE TO PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 7,850,313**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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| Exhibit No. | Description |
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| EX2001 | Complaint, <i>Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (Dkt. 1) (filed July 9, 2024) |
| EX2002 | March 26, 2025, Memorandum to All PTAB Judges from Coke Morgan Stewart, Acting Secretary of Commerce for Intellectual Property, Regarding the Interim Processes for PTAB Workload Management |
| EX2003 | First Amended Docket Control Order, <i>Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (Dkt. 65) (January 7, 2025) |
| EX2004 | Order Resetting <i>Markman, Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (Dkt. 91) (April 24, 2025) |
| EX2005 | Order Denying Motion to Transfer, <i>Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (Dkt. 85) (March 25, 2025) |
| EX2006 | Order Granting Motion to Dismiss, <i>Optoma Technology, Inc. v. Maxell, Ltd.</i> , No. 3:24-cv-08147-TLT (N.D. Cal.) (Dkt. 58) (March 14, 2025) |
| EX2007 | Plaintiff's Preliminary Election of Asserted Claims, <i>Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (Dkt. 78) (March 11, 2025) |
| EX2008 | Defendants' Invalidity Contentions, <i>Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (served on December 27, 2024) |
| EX2009 | Preliminary Election of Asserted Art, <i>Maxell, Ltd. v. Coretronic Corp.</i> , No. 5:24-cv-00088-RWS-JBB (E.D. Tex.) (served on March 25, 2025) |
| EX2010 | USPTO Rescinds Memorandum Addressing Discretionary Denial Procedures (February 28, 2025), https://www.uspto.gov/about-us/news-updates/uspto-rescinds-memorandum-addressing-discretionary-denial-procedures |
| EX2011 | March 24, 2025, Memorandum to Members of the Patent Trial and Appeal Board from Scott R. Boalick, Chief Administrative Patent Judge, Guidance on USPTO's Recission of "Interim |

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| | Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation” |
| EX2012 | FAQs for Interim Processes for PTAB Workload Management, https://www.uspto.gov/patents/ptab/faqs/interim-processes-workload-management |

LISTING OF CHALLENGED CLAIMS¹

| Claim | Claim Text |
|--------------|---|
| [1.0] | A projection type image display apparatus, comprising: |
| [1.1] | an image display element; |
| [1.2] | a first lens group, being disposed in a light direction with respect to said image display element, which is configured to include a plural number of lenses; |
| [1.3] | a second lens group, being disposed in a light direction with respect to said first lens group, which is configured to include a plural number of lenses; |
| [1.4] | a reflection mirror, which is configured to reflect lights emitted from at least one of said first and second lens groups, so as to project upon said screen obliquely; |
| [1.5] | a first mounting base, on which said first lens group is mounted; |
| [1.6] | a second mounting base, on which said second lens group is mounted; and |
| [1.7] | a chassis, which is configured to store said first and second lens group, said reflection mirror, and said first and second mounting bases; |
| [1.8] | wherein said first mounting base is fixed at a bottom of said chassis, while said second mounting base is moveable. |
| [2] | The projection type image display apparatus, according to claim 1, wherein an optical axis of said first and second lens group is inclined to a normal line at a center of a surface of said image display element. |
| [3.0] | The projection type image display apparatus, according to claim |

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

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| | 1, further comprising: |
| [3.1] | a rod member, which makes said second mounting base movable. |

I. INTRODUCTION

Patent Owner Maxell, Ltd. ("Patent Owner") respectfully requests that the Board deny institution of the Petition filed by Coretronic Corporation and Optoma Corporation (hereinafter "Petitioners") challenging the patentability of claims 1-3 ("challenged claims") of U.S. Patent No. 7,850,313 ("the '313 Patent") (EX1001).

Petitioners have failed to demonstrate a reasonable likelihood of success on the grounds submitted in its Petition. None of the cited references, whether taken alone or in reasonable combination, disclose or render obvious the arrangement of each limitation in claims 1-3. 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. Jose Sasian's declaration (EX1004), which simply parrots Petitioners' 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, Petitioners have failed to meet their burden of showing a reasonable likelihood of prevailing. Accordingly, the Board should deny Petitioners' request to institute *inter partes* review.

II. BACKGROUND

A. Overview of the '313 Patent

The '313 Patent, entitled "Projection Type Image Display Apparatus," is generally directed to improving projection systems capable of wide-angled imaging. EX1001 3:36-49. During the time of the '313 Patent, methods of projecting images onto a screen commonly caused "trapezoidal distortion," a type of visual distortion in the projected image. *See id.* at 1:54-56. Known methods to suppress trapezoidal distortion included using lenses that required the projector to be placed a large distance from a screen, required a large aperture, or resulted in a larger projection system entirely. *See id.* at 1:61-2:9. The resultant projector systems were costly to manufacture. *See id.*; *see also id.* at 2:11-20.

Attempts to reduce the projection distance to enable wide-angled imaging while also reducing the size of the resultant projection system considerably raised the technical difficulty required to manufacture the projection system. *See id.* at 2:21-35. For example, a known method to obtain wide-angled imaging used reflection mirrors in place of "the conventional image forming optic system of transmission type." However, this required particular placement and angling of the reflection mirrors. *See id.* Such particularity was difficult to maintain, particularly because vibration of the projection system could displace the reflection mirrors. *See*

id.

Therefore, the '313 Patent targeted enabling wide-angled imaging while maintaining a compact size of the projection system that was easy to manufacture and did not result in trapezoidal distortion. EX1001 at 2:36-49. To accomplish this, the '313 Patent describes a “projection-type image display apparatus for projecting an image” with a particular configuration of lenses and properties. *See id.* at 2:50-67. This includes front and rear lens groups, a reflection mirror, and a movement member for moving the lenses of the rear lens group. *See id.*

B. Patent Prosecution History

U.S. Patent Application No. 12/825,836—which would ultimately issue as the '313 Patent –was filed on June 29, 2010, as the continuation of application No. 11/763,465, filed on June 15, 2007 (and now issued as U.S. Patent No. 7,766,488). Both aforementioned patents claim priority to Japanese Application No. 2006-166434, filed on June 15, 2006.

C. Summary of Petitioners' Proposed Grounds for Unpatentability

Petitioners allege that claims 1-3 of the '313 Patent would have been obvious under pre-AIA U.S.C. § 103 and raises seven grounds of alleged unpatentability. Pet. 12-13. The alleged invalidity grounds are summarized as follows:

| Ground | '313 Claims | Type of Challenge | References |
|--------|-------------|-------------------|--|
| 1 | 1, 3 | § 103 | Yamagishi '723, Itohiya '986, Itohiya '759 |
| 2 | 2 | § 103 | Yamagishi '723, Itohiya '986, Itohiya '759, Ohzawa |
| 3 | 1, 3 | § 103 | Itohiya '759, Itohiya '986 |
| 4 | 2 | § 103 | Itohiya '759, Itohiya '986, Ohzawa |
| 5 | 1 | § 103 | Karasawa, Yamagishi '706, Itohiya '759 |
| 6 | 2 | § 103 | Karasawa, Yamagishi '706, Itohiya '759, Ohzawa |
| 7 | 3 | § 103 | Karasawa, Yamagishi '706, Itohiya '759, Itohiya '986 |

III. LEVEL OF ORDINARY SKILL

For purposes of this preliminary response, a person of ordinary skill in the art would have had a Bachelor of Science degree in Electrical Engineering, Physics, Optics, or an equivalent degree, and at least one year of experience working in the field of optical engineering, optical design, or a related field. Additional education and/or experience may provide a substitute for one of the qualifications of a person of ordinary skill in the art.

While Patent Owner's definition of a person of ordinary skill in the art differs from that of Petitioners', the level of ordinary skill need not be resolved for the purposes of the preliminary response. Patent Owner reserves the right to contest

Petitioners' definition at a later time.

IV. CLAIM CONSTRUCTION

For the purposes of the preliminary response, Patent Owner adopts the position that no terms need construction. Terms should be given their plain and ordinary meaning.

V. LEGAL STANDARD

Under 35 U.S.C. § 102(a) (pre-AIA), an issued patent is invalid if “the invention [therein] was . . . described in a printed publication . . . before the invention thereof by the applicant.” This statute “embodies the concept of novelty—if a device or process has been previously invented (and disclosed to the public), then it is not new, and therefore the claimed invention is ‘anticipated’ by the prior invention.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). To anticipate, “the prior art reference . . . must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Id.* (citing *Connell v. Sears Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

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)

(pre-AIA). 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 the petitioner’s burden to prove unpatentability, *E.I DuPont de Nemours & Co. v. Synvina C.V.*, 904 F.3d 996, 1007 (Fed. Cir. 2018), and “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 PETITION DOES NOT SHOW A LIKELIHOOD OF PREVAILING WITH RESPECT TO ANY CHALLENGED CLAIM

A. Ground 1: Petitioners Fail to Establish That Claims 1 and 3 Would Have Been Obvious Based on Yamagishi '723, Itohiya '986, and Itohiya '759

1. Petitioners Fail to Establish that a POSITA Would Combine Yamagishi '723, Itohiya '986, and Itohiya '759

For Ground 1, Petitioners rely on a purported combination of Yamagishi '723, Itohiya '986, and Itohiya '759. Pet. 12-13. However, Petitioners fail to provide sufficient motivation to combine Yamagishi '723, Itohiya '986, and Itohiya '759. *See, e.g., id.* at 23-24. Ground 1 thus fails.

Petitioners rely on rationales such as “because Itohiya '986 and Itohiya '759 share the same named inventor,” without citing any legal support that this would be adequate to establish motivation to combine. *See id.* at 23. The alleged “ease” of locating a reference is unrelated to *motivation* to combine the references, particularly because the hypothetical POSITA is already “presumed to be aware of all the pertinent prior art.” *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986).

Petitioners also rely on the fact that Yamagishi '723, Itohiya '986, and Itohiya '759 are “all . . . directed to optical systems that project light from an image-generating device onto a screen by way of groups of lenses.” Pet. 21. Petitioners

claim that “the references are in the same field of endeavor and POSITAs would naturally have looked to all of them in their work in this area.” Pet. 22. However, the mere fact that the references are in the “same field” is insufficient rationale for combining these references. *See Securus Techs., Inc. v. Global Tel*Link Corp.*, 701 F. App’x 971, 977 (Fed. Cir. 2017) (“a broad characterization of [references] as both falling within the same alleged field . . . without more, is not enough for [Petitioners] to meet its burden of presenting a sufficient rationale to support an obviousness conclusion”); *William Wesley Carnes, Sr., Inc. v. Seaboard Int’l Inc.*, IPR2019-00133, Paper 10 at 18-19 (P.T.A.B. May 8, 2019).

Petitioners also allege that:

A POSITA would further have recognized that Itohiya ‘986 specifically describes the benefits of having certain lenses in a rear projection system be moveable while other lenses in the system are fixed in place. . . . [I]t would have been desirable to have some of the lenses in the projection system be moveable in order to allow for the precise focusing and/or magnification of a projected image on a screen.

Pet. 22.

But Itohiya ‘986 states that it is directed to a limited purpose: reducing the need for an “eccentric pin” or “spacing rings” that are used in very particular systems: *e.g.*, surveillance cameras or rear projection televisions where “the distance

from the image display device is extremely short e.g., 60cm to 90cm, and in order to accommodate all components in a thin housing, the projection magnification is high at 40X to 100X.” EX1006 ¶¶ [0005]-[0011]. The “eccentric pin” or “spacing rings” were used for the “final fine-tuning of the lens placement” to allow for careful positioning needed for these specific systems, but are flawed in that they are costly or end up being unstable over time. *See id.* ¶¶ [0005], [0010], [0012]. Thus, Itohiya '986 discloses a “solution” for a lens system that “can be stably fixed for a long period of time without the risk of eccentricity.” *See id.* ¶ [0020]; *see also id.* ¶ [0014].

This is further supported by the description of the “first embodiment” of Itohiya '986, which is the embodiment corresponding to Figures 1 and 2 that is cited by Petitioners. *See, e.g.,* Pet. 32 (citing Figures 1 and 2 of Itohiya '986). The description of Itohiya '986 states:

The optical device of the first embodiment operates as follows. First, as shown ***in Figures 1 and 2***, [the device] is assembled so that the three cam studs 75 are respectively cam-engaged in each of the cam grooves 40 on sliding lens frame 32. At the same time, adjustment fixing screw 62 is screwed into threaded hole 64 on sliding stud 44, wherein columnar part 50 is slidably engaged with straight sliding groove 38. In this state, cam groove 40 is guided by cam stud 75 through the rotation of adjustment fixing screw 62 around the optical axis. I.e., when adjustment fixing screw 62 is rotated around the optical axis, columnar

part 50 moves within straight sliding groove 38. *As a result, lenses 1 and 2, supported by sliding lens frame 32, move along the optical axis, adjusting the position of the lenses 1 and 2.*

When this positional adjustment is completed, fastening nut 70 is tightened onto large-diameter screw portion 72. At this time, engagement of flat part 52 with circumferential sliding groove 34 *prevents the rotation of adjustment fixing screw 62.* Tightening of tightening nut 70 causes the columnar part 50 of sliding stud 44 and the tightening nut 70 to clamp fixed lens barrel member 4, so that *the sliding lens frame 32, i.e., lenses 1 and 2, is fixed to the fixed lens barrel portion.*

EX1006 ¶ [0029] (alterations in original) (emphases added).

This description supports that the adjustment is for assembly and that the final step is fixing the lens to the fixed lens barrel portion. *See id.* Itohiya '986 is thus clear that its purpose is to replace the “final fine tuning” during assembly of the projection device, and fixing lenses 1 and 2, rather than enabling movement of the lenses 1 and 2 of the projection device. *See* EX1006 ¶¶ [0005], [0014], [0029].

Petitioners fail to identify any portion of Yamagishi '723 or Itohiya '759, that suggests that Yamagishi '723 or Itohiya '759 contain systems that would benefit from a new method of fixing lenses. Petitioners instead allege a combination unrelated to fixing lenses and state that “the references are in the same field of

endeavor and POSITAs would naturally have looked to all of them in their work in their area.” Pet. 22. As stated previously, the fact that references are in the same field is not enough to establish motivation. *Securus Techs., Inc.*, 701 F. App’x at 977.

Additionally, Petitioner’s purported combination relies on modifying Yamagishi ’723 based on Itohiya ’986 to “hav[e] certain lenses in a rear projection system be moveable while other lenses in the system are fixed.” Pet. 22. This combination is unsupported by Itohiya ’986, which is not directed to a system with moveable lenses, but rather a system of fixing lenses during the final fine tuning of lenses (*i.e.*, ***assembly*** of the projection device). *See, e.g.*, EX1006 ¶¶ [0005], [0014]. Petitioners’ rationale, which is based on creating an alleged combination consisting of “a system with both fixed and moveable lenses,” is thus unsupported by the cited references. *See* Pet. 23. Petitioners have thus failed to provide a “clear, evidence-supported account of the contemplated working of the combination” of Yamagishi ’723, Itohiya ’986, and Itohiya ’759. *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017).

Further, Petitioners’ alleged motivations are cursory and unsupported and therefore fail to meet “Petitioner[s]’ burden to explain specifically ‘***how*** . . . the references would be combined to produce the claimed invention.’” *Lowe’s Home Centers, LLC v. Epistar Corp.*, IPR2018-00932, Paper 7 at 19 (P.T.A.B. Nov. 1,

2018) (citations omitted). For example, Petitioners fail to address that Itohiya '986 already includes a mounting method (*i.e.*, product mounting flange portion 12) and therefore fail to provide rationale for why a POSITA would be motivated to replace Itohiya '986's product mounting flange portion with Itohiya '759's mounting method of fastening a lens barrel to a lower cabinet. *Compare, e.g.*, EX1006B Figs. 1-2 *with* EX1007 ¶ [0040]. In other words, Petitioners fail to address why a POSITA would be motivated to replace the mounting system already discussed in Itohiya '986 with a different mounting method. While the features of a secondary reference need not be bodily incorporated into the structure of the primary reference, a “clear, evidence-supported account of the contemplated workings of the combination is a prerequisite to adequately explaining and supporting a conclusion that a relevant skilled artisan would have been motivated to make the combination and reasonably expect success in doing so” is required. *Personal Web Techs.*, 848 F.3d at 994. Petitioners' conclusory statements are “insufficient articulations of motivations to combine” and thus Petitioners have failed to establish any reasonable likelihood of success in Grounds 1-4. *See In re Nuvasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016).

Petitioners' Opposition to Patent Owner's discretionary brief supports that they have failed to provide a “a “clear, evidence-supported account of the

contemplated workings of the combination.” *See* Paper at 12. Recognizing their deficiencies, Petitioners state: “Based on the teaching from Itohiya ’759, as shown in the annotated figures of Itohiya ’986 and Itohiya ’759 below, a POSITA would recognize that the product mounting flange portion of Itohiya ’986 would be fixed to the lower cabinet of the projector so as to fix the fixed lens group.” *See id.* at 13-14.

This argument was raised for the first time in Petitioners’ Opposition to Patent Owner’s discretionary brief, as shown by lack of citation to anything in the Petition or expert declaration. *See id.* Petitioners’ purported combination of fixing the product mounting flange portion to the lower cabinet of the projector is a new argument that Petitioners failed to present in their Petition. Accordingly, the Board should decline to consider this argument. *See* 37 C.F.R. § 42.23(b) (“All arguments for the relief requested in a motion must be made in the motion.”).

2. Petitioners Fail to Establish That Claim Limitation [1.8] Would Have Been Obvious In View of Yamagishi ’723 and Further in View of Itohiya ’986 and Itohiya ’759

Claim limitation [1.8] recites “wherein said first mounting base is fixed at a bottom of said chassis, while said second mounting base is moveable.” Petitioners fail to establish that claim limitation [1.8] would have been obvious in view of Yamagishi ’723, Itohiya ’986, and Itohiya ’759.

Petitioners' rationale fails for at least two reasons: (1) the cited references fail to disclose or render obvious a "second mounting base is moveable"; and (2) the cited references fails to disclose or render obvious a "second mounting base [on which said second lens group is mounted] is moveable," as recited in claim 1.

First, Petitioners fail to establish any "second mounting base" that is "moveable" in any of the cited references. *See supra* Section VI.A.1. Petitioners concede that Yamagishi '723 does not disclose this limitation and instead rely on Itohiya '986 to disclose this feature. Pet. 35-36 ("Yamagishi '723 does not expressly disclose a first mounting base fixed at a bottom of the chassis of its projection type display apparatus, or a second mounting base that is moveable."). But Itohiya '986 also fails to disclose a moveable mounting base.

Petitioners rely on Itohiya's sliding lens frame 32 to satisfy the "moveable second mounting base," recited in limitation [1.8]. Pet. 33; *see also* Pet. 35-36 (citing back to discussion of limitation [1.6] for "moveable second mounting base"). But Itohiya '986 makes clear that the sliding lens frame is merely used to **assemble** the projection device. *See, e.g.*, EX1006 ¶¶ [0005], [0014], [0029]. For example, Itohiya '986 states:

When this positional adjustment is completed, fastening nut 70 is tightened onto large-diameter screw portion 72. At this time, engagement of flat part 52 with circumferential sliding groove 34

prevents the rotation of adjustment fixing screw 62. Tightening of tightening nut 70 causes the columnar part 50 of sliding stud 44 and the tightening nut 70 to clamp fixed lens barrel member 4, *so that the sliding lens frame 32, i.e., lenses 1 and 2, is fixed to the fixed lens barrel portion.*

Id. ¶ [0029]. Thus, Itohiya '986 clarifies that the sliding lens frame is moveable for final positioning of lenses 1 and 2, and then transitions into a fixed state. This is confirmed by Itohiya '986's explicitly stated purpose: Itohiya '986 is directed to an improved "final fine-tuning of the lens placement" and states its object is to provide an "adjusted lens system [that] can be stably fixed for a long period of time without the risk of eccentricity in at least a part of the adjusted lens system." *See id.* ¶¶ [0005], [0014].

This distinction is important because Petitioners' cited portions of Itohiya '986 merely refer to a method of precisely adjusting lenses for *assembly* of a projection device but does not define the resultant projection device itself.

Itohiya '759 fails to cure the deficiencies of Itohiya '986 and Petitioners fail to allege so. Petitioners fail to cite Itohiya '759 in relation to the second mounting base at all. Pet. 35-36.

Second, Petitioners fail to demonstrate that the cited references disclose or render obvious claim limitation [1.8] based on its dependence on other claim

limitations. Claim limitation [1.8] recites several features previously defined in other claim limitations. For example, claim limitation [1.5] requires that the first mounting base is associated with *the first lens group*. EX1001 cl. 1 (“a first mounting base, on which said first lens group is mounted”). Claim limitation [1.6] further requires that the second mounting base is associated with the *second lens group*. EX1001 cl. 1 (“a second mounting base, on which said second lens group is mounted”). Next, claim limitation [1.3] defines positioning of the first lens group with respect to the second lens group, stating that the “second lens group” is “disposed in a light direction with respect to said first lens group.”

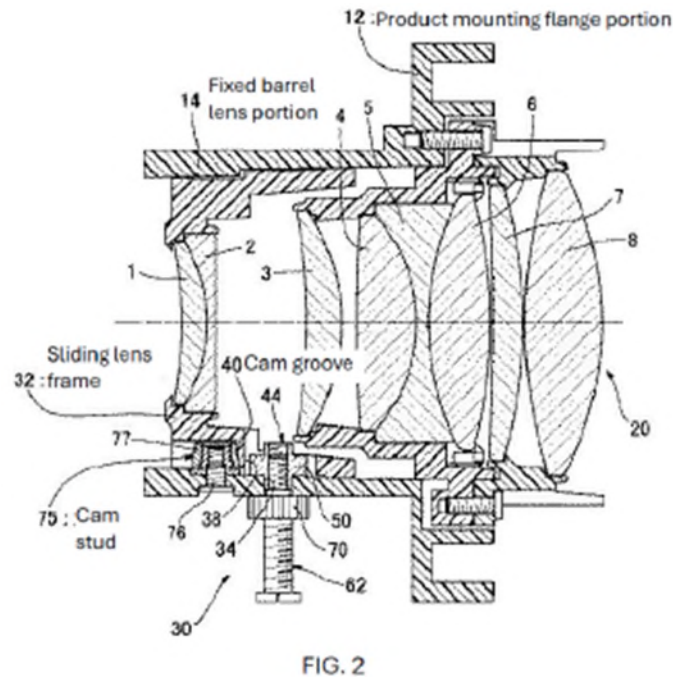
In consideration of these features, none of Yamagishi '723, Itohiya '986, or Itohiya '759 teach limitation [1.8]. Petitioners concede that Yamagishi '723 does not disclose this limitation and instead state that Itohiya '986 and Itohiya '759 disclose features of this claim limitation. Pet. 35-36 (“Yamagishi '723 does not expressly disclose a first mounting base fixed at a bottom of the chassis of its projection type display apparatus, or a second mounting base that is moveable.”). Specifically, Petitioners allege that Itohiya '986 discloses the “fixed first mounting base and a moveable second mounting base” and that Itohiya '759 discloses that the “first mounting base is fixed at a bottom of a chassis.” Pet. 35-36.

However, Itohiya '986 fails to disclose the “fixed first mounting base” and the “moveable second mounting base,” as required by limitation [1.8]. For the “fixed first mounting base, Petitioners state that the product mounting flange portion 12 and a fixed lens barrel portion 14 that support lenses 3-8 satisfy the “fixed first mounting base.” *See* Pet. 32; *see also* Pet. 35-36 (citing back to discussion of limitation [1.5] for “fixed first mounting base”).

For the “moveable second mounting base,” Petitioners state that the sliding lens frame 32, which supports lenses 1 and 2, in Itohiya '986, satisfies the “moveable second mounting base,” recited in limitation [1.8]. Pet. 33; *see also* Pet. 35-36 (citing back to discussion of limitation [1.6] for “moveable second mounting base”).

But these components of Itohiya '986 cannot satisfy limitation [1.8]. For example, the alleged “second mounting base” is not associated with a lens group that is “disposed in a light direction with respect to said first lens group,” as required by claim 1. Instead, Itohiya '986's alleged “second lens group” is associated with lenses 1-2, which are not disposed in a light direction with respect to lenses 3-8 (the alleged “first lens group.”

Figures 1-2 of Itohiya '986, which show lenses 1-8 are reproduced below for reference.



EX1006 Fig. 2.

Itoshiya '986 states that light travels through lenses 1-2 and then lenses 3-8 to project an image. *See* EX1006 Fig. 2, ¶ [0023]. For example, paragraph [0023] states that: “Lenses 1 and 2, whose position on the optical axis greatly affects the image formation performance and focal length of imaging lens 20, are supported in such a way that [their] position on the optical axis can be adjusted by a lens position adjustment mechanism 30.” EX1006 ¶ [0023] (alterations in original). The fact that lenses 1 and 2 affect the image formation performance and focal length of imaging lens 20 shows that light travels from lenses 1-2 to imaging lens 20. *See id.* As shown in Fig. 2 of Itoshiya '986, lenses 3-8 are disposed between lens 2 and imaging lens

20, thus confirming that lenses 1-2 are not disposed in a light direction with respect to lenses 3-8. *See id.* Fig. 2, ¶ [0023].

Itoshiya '759 fails to cure the deficiencies of Itoshiya '986. As stated previously, Petitioners only cite Itoshiya '759 in relation to “details of how its first mounting base is fixed at a bottom of a chassis,” and fails to cite Itoshiya '759 in relation to a moveable second mounting base. *See* Pet. 35-36.

For at least the foregoing reasons, Petitioners fail to establish that claim limitation [1.8] would have been obvious based on Yamagishi '723, Itoshiya '986, and Itoshiya '759.

3. Petitioners Fail to Establish That Claim 3 Would Have Been Obvious In View of Yamagishi '723 and Further in View of Itoshiya '986 and Itoshiya '759

Claim 3 depends on claim 1. Therefore, for at least the same reasons presented above in relation to claim 1 in Ground 1, Petitioners fail to establish that claim 3 would have been obvious based on Yamagishi '723, Itoshiya '986, and Itoshiya '759.

Therefore, Petitioners fail to establish that Ground 1 would have been obvious based on Yamagishi '723, Itoshiya '986, and Itoshiya '759.

B. Ground 2: Petitioners Fail to Establish That Claim 2 Would Have Been Obvious Based on Yamagishi '723, Itoshiya '986, Itoshiya '759, and Ohzawa

Claim 2 depends on claim 1. Therefore, for at least the same reasons presented

above in relation to claim 1 in Ground 1, Petitioners fail to establish that claim 2 would have been obvious based on Yamagishi '723, Itohiya '986, and Itohiya '759. *See supra* Section VI.A. For example, Petitioners fail to provide sufficient combination rationale in relation to Yamagishi '723, Itohiya '986, and Itohiya '759, and Petitioners fail to establish that claim limitation [1.8] would have been obvious based on Yamagishi '723, Itohiya '986, and Itohiya '759. *See id.*

Ohzawa fails to cure the deficiencies of Yamagishi '723, Itohiya '986, and Itohiya '759 and Petitioners fail to even allege so. Petitioners only cite Ohzawa in relation to Claim 2's recitation of "wherein an optical axis of said first and second lens group is inclined to a normal line at a center of a surface of said image display element." Pet. 41-42.

Therefore, Petitioners fail to establish that Ground 2 would have been obvious based on Yamagishi '723, Itohiya '759, Itohiya '986, and Ohzawa.

C. Ground 3: Petitioners Fail to Establish That Claims 1 and 3 Would Have Been Obvious Based on Itohiya '759 and Itohiya '986

1. Petitioners Fail to Establish that a POSITA Would Combine Itohiya '759 and Itohiya '986

Petitioners rely on a combination of Itohiya '759 and Itohiya '986 for Ground 3. *See, e.g.*, Pet. 43. Petitioners rely on substantially similar combination rationale for Ground 3 as the combination rationale provided in Ground 1. *See, e.g.*, Pet. 43-

44. Thus, Petitioners' combination rationale fails for the same reasons provided in relation to Ground 1. *See supra* Section VI.A.1.

For example, Petitioners' remarks that "Both of these references are directed to optical systems that project light from an image generating device onto a screen by way of lenses" is lacking. Pet. 43. Generally providing that references are in the "same field" is insufficient rationale. *See Securus Techs., Inc. v. Global Tel*Link Corp.*, 701 F. App'x 971, 977 (Fed. Cir. 2017).

Further, the fact that the two references have the "same named inventor" is insufficient combination rationale and Petitioners fail to cite authority to support this notion. Pet. 44; *see supra* Section VI.A.1.

Next, Petitioners' purported combination is based on "systems with fixed and moveable lenses." Pet. 44. However, Petitioners rely on combining components from Itohiya '986 that are unrelated to a system of moveable lenses, and instead a system of assembling fixed lenses. *See* EX1006 ¶ [0005] ("The present invention was undertaken in view of problems with conventional optical devices, and has the object of providing an optical device . . . in which at least part of the adjusted lens system can be ***stably fixed*** for a long period of time ***without the risk of eccentricity*** in at least a part of the adjusted lens system." (emphasis added)); *supra* Section VI.A.1.

Petitioners have thus failed to provide a “clear, evidence-supported account of the contemplated working of the combination” of Itohiya ’759 and Itohiya ’986. *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017); *see also supra* Section VI.A.1.

Therefore, Petitioners have failed to provide sufficient rationale to combine Itohiya ’759 and Itohiya ’986 and Ground 3 should fail for this reason alone.

2. Petitioners Fail to Establish That Claim Limitation [1.8] Would Have Been Obvious In View of Itohiya ’759 and Further in View of Itohiya ’986

In relation to claim limitation [1.8], Petitioners state that Itohiya ’986 discloses that “the second mounting base is moveable.” Pet. 54. However, for the same reasons expressed in relation to Ground 1, Petitioners fail to demonstrate that Figure 2 of Itohiya ’986 discloses that the second mounting base is moveable. *See supra* Section VI.A.2. For example, Petitioners fail to identify a second mounting base because Itohiya ’986 describes a method of adjusting lenses for assembling the projection device rather than the resultant projection device itself. *See id.* Further, Petitioners fail to identify a second mounting base that is associated with a lens group that is “disposed in a light direction with respect to said first lens group,” as required by claim 1.

Itohiya '759 fails to cure the deficiencies of Itohiya '986. Petitioners concede that Itohiya '759 fails to disclose that “second mounting base itself is moveable” and fail to identify any component in Itohiya '759 that would satisfy the second mounting base, where the second mounting base is moveable. *See* Pet. 54 (“Itohiya '759 may not expressly disclose that the second mounting base itself is moveable”).

Therefore, Petitioners fail to establish that claim 1 would have been obvious based on Itohiya '759 and Itohiya '986.

3. Petitioners Fail to Establish That Claim 3 Would Have Been Obvious In View of Itohiya '759 and Further in View of Itohiya '986

Claim 3 depends on claim 1. Therefore, for at least the same reasons presented above in relation to claim 1 in Ground 3, Petitioners fail to establish that claim 3 would have been obvious based on Itohiya '986, and Itohiya '759. *See also supra* Section A.2.

Therefore, Petitioners fail to establish that claim 3 would have been obvious based on Itohiya '759 and Itohiya '986.

D. Ground 4: Petitioners Fail to Establish That Claim 2 Would Have Been Obvious Based on Itohiya '759, Itohiya '986, and Ohzawa

Claim 2 depends on claim 1. Therefore, for at least the same reasons presented above in relation to claim 1 in Ground 3, Petitioners fail to establish that claim 2 would have been obvious based on Itohiya '759 and Itohiya '986. *See supra* Section

VI.C.

Ohzawa fails to cure the deficiencies of Itohiya '759 and Itohiya '986, and Petitioners fail to even allege so. Petitioners only cite Ohzawa in relation to Claim 2's recitation of "wherein an optical axis of said first and second lens group is inclined to a normal line at a center of a surface of said image display element." Pet. 41-42.

Therefore, Petitioners fail to establish that Ground 4 would have been obvious based on Itohiya '759, Itohiya '986, and Ohzawa.

E. Ground 5: Petitioners Fail to Establish That Claim 1 Would Have Been Obvious Based on Karasawa, Yamagishi '706, Itohiya '759

1. Petitioners Fail to Establish that a POSITA Would Combine Karasawa, Yamagishi '706, and Itohiya '759

Each of Grounds 5-7 depend on a combination of Karasawa, Yamagishi '706, and Itohiya '759. Pet. 12-13. However, Petitioners' rationales for combining Karasawa, Yamagishi '706, and Itohiya '759 are deficient.

Petitioners rely on broad statements that "the references are in the same field of endeavor and POSITAs would naturally have looked to them in their work" and "[a] POSITA looking at Karasawa's and Yamagishi's '706's teachings related to systems with fixed and moveable lenses would naturally have looked to Itohiya '759 for additional implementation details for such systems." Pet. 62, 64.

This is not enough. As stated previously, being within the “same field” does not provide sufficient evidence of a motivation to combine. *See Securus Techs., Inc. v. Global Tel*Link Corp.*, 701 F. App'x 971, 977 (Fed. Cir. 2017) (“a broad characterization of [references] as both falling within the same alleged field . . . without more, is not enough for [Petitioners] to meet its burden of presenting a sufficient rationale to support an obviousness conclusion”).

Further, while Petitioners assert a combination of the three references, Petitioners fail to actually “explain specifically *‘how . . . the references would be combined to produce the claimed invention.’*” *See Lowe's Home Centers, LLC v. Epistar Corp.*, IPR2018-00932, Paper 7 at 19 (P.T.A.B. Nov. 1, 2018) (citations omitted).

For example, while Petitioners assert that “A POSITA would have been motivated to take advantage of these teachings by combining Yamagishi '706's disclosures with those of Karasawa” in relation to “having only certain lenses . . . move,” Petitioners do not sufficiently explain *how* a POSITA would have modified Karasawa to arrive at the claimed structure. The claimed structure includes a “projection type image display apparatus . . . wherein said first mounting base is fixed at a bottom of said chassis, *while said second mounting base is moveable.*” Petitioners fail to identify any *structure* in Karasawa, Yamagishi '706, and Itohiya

'759 corresponding to the second mounting base, "while said second mounting base is moveable," as recited in limitation [1.8]. *See, e.g., infra* Section VI.E.2. Petitioners only state that a **lens** is moveable but fail to identify any component in Karasawa, Yamagishi '706, and Itohiya '759 that would satisfy a **moveable** second **mounting base**. *See, e.g.* Pet. 63-64, 75-77.

The failure to identify a part of a whole means any alleged combination is unrealized. Petitioners therefore fail to provide **how** a POSITA would have modified Karasawa with Yamagishi '706 to arrive at the claimed structure, which includes a "projection type image display apparatus [wherein] **said second mounting base is moveable**" because Petitioners fail to identify any alleged component corresponding to this part of the claimed structure.

Petitioners' Opposition to Patent Owner's discretionary brief supports that they have failed to identify a structure corresponding to a **second mounting base, while said second mounting base is moveable**. *See* Paper 6 at 16. Recognizing their deficiencies, Petitioners claim "a POSITA would have recognized the necessity of a moveable mounting base (*e.g.*, a barrel) that allows for the movement of the moveable lens group, as the lens group cannot fly independently in the air." *See id.*

This argument was raised for the first time in the Petitioners' Opposition to Patent Owner's discretionary brief, as shown by lack of citation to anything in the

Petition or expert declaration. *See id.* The Board should not consider this argument because Petitioners failed to present this argument in their Petition. *See* 37 C.F.R. § 42.23(b). Further, Petitioners' arguments are unsupported attorney argument, conclusory, and still fail to provide sufficient rationale to combine.

"All arguments for the relief requested in a motion must be made in the motion." 37 C.F.R. § 42.23(b). Petitioners' argument exceeds the scope because it presents an "entirely new rationale to explain why one of skill in the art would have been motivated to combine [the references]." *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1370 (Fed. Cir. 2016).

Further, while Petitioners allege what a **POSITA** would have recognized, Petitioners assert only unsupported attorney argument. *See* Paper 6 at 16. In light of Petitioners' high level of ordinary skill in the art² relied upon in its Petition, this position is untenable. *See, e.g.*, Pet. 13 ("[A] POSITA would have had a Ph.D. in electrical engineering, physics, optical sciences, optical engineering, or a related scientific or engineering field, and at least one to two years of work or research experience in optical engineering, optical design, or a related field."). Petitioners'

2. Patent Owner does not concede to Petitioners' level of ordinary skill, and instead addresses why the Petition is deficient in light of Petitioners' proffered level of ordinary skill.

requires a high level of ordinary skill yet fails to provide any expert testimony or other factual evidence to support its motivation to combine the references. *See BlephEx, LLC v. Myco Indus., Inc.*, 24 F.4th 1391, 1401 (Fed. Cir. 2022) (“Myco argues that the level of skill in the relevant art is extremely high, . . . But Myco offers nothing other than attorney argument as to what the highly skilled artisan would do. Although Myco need not present the kind of evidence that would be required at trial, a substantial question of validity cannot be manufactured through mere supposition about what an artisan with highly advanced skill in the medical field might do.”).

Nor is their argument technically supported. For example, a lens may be supported by a stationary mounting base and moveable via some other component other than the mounting base. Petitioners fail to support their conclusory statement that a moveable lens necessitates, discloses, or renders obvious a moveable mounting base.

While Petitioners state that they have identified a structure in relation to an earlier claim element, they failed to establish the claimed language: second mounting base.

Petitioners' expert declaration, which merely mimic the Petition, suffers the same deficiencies. *Compare, e.g.,* Pet. 62-64 with EX1004 ¶¶ 145-48; *see generally* Paper 7 at 20-23.

Therefore, Petitioners fail to provide a “clear, evidence-supported account of the contemplated workings of the combination” of Karasawa, Yamagishi ’706, and Itohiya ’759, as required by case law. *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017). This Ground should fail for this reason alone.

2. Petitioners Fail to Establish That Claim Limitation [1.8] Would Have Been Obvious In View of Karasawa and Further in View of Yamagishi ’706 and Itohiya ’759

Limitation [1.8] recites “wherein said first mounting base is fixed at a bottom of said chassis, while said second mounting base is moveable.” Petitioners fail to establish that limitation [1.8] is obvious based on Karasawa, Yamagishi ’706 and Itohiya ’759.

Petitioners concede that the primary reference for Ground 5, Karasawa, fails to disclose limitation [1.8]. Pet. 76 (“Karasawa may not expressly disclose separate mounting bases for its two lens groups where the first mounting base is fixed at a bottom of the chassis while the second mounting base is moveable.”). Petitioners allege that Yamagishi ’706 discloses this limitation. *Id.*

Petitioners state that “Yamagishi ’706 teaches that ‘[t]he present invention has been described based on a fixed focal length lens-type lens system where no lenses aside from the focusing lens move. . . . In other words, Yamagishi ’706’s group of focusing lenses move, while its other lenses are fixed in place.” Pet. 76. Even

assuming Petitioners' characterization of Yamagishi '706 to be true, there is no disclosure that the "*second mounting base* is moveable," as recited in claim limitation [1.8]. Petitioners only state that lenses may move without showing that a mounting base, on which the second lens group is mounted, causes such movement. *See* Pet. 76-77. To further illustrate this deficiency, Petitioners fail to cite any structure of Yamagishi '706 that would satisfy the "second mounting base." *See id.*

Petitioners fail to provide any additional evidence, argument, or combination rationale that a moveable mounting base would be obvious in light of Yamagishi '706's disclosure. *See id.*

Itohiya '759 fails to cure the deficiencies of Yamagishi '706. Petitioners only cite Itohiya '759 in relation to the portion of the claim that related to the first mounting base and not the second mounting base. Pet. 77 ("While Yamagishi '706 may not disclose the details of how its first mounting base is fixed at a bottom of a chassis, a POSITA would look to Itohiya '759 for such additional details.").

Therefore, Petitioners fail to establish that claim limitation [1.8] would have been obvious based on Karasawa, Yamagishi '706, and Karasawa.

F. Ground 6: Petitioners Fail to Establish That Claim 2 Would Have Been Obvious Based on Karasawa, Yamagishi '706, Itohiya '759, and Ohzawa

Claim 2 depends on claim 1. Therefore, for at least the same reasons presented

above in relation to claim 1 in Ground 5, Petitioners fail to establish that claim 2 would have been obvious based on Karasawa, Yamagishi '706, and Itohiya '759. *See supra* Section VI.E.

Ohzawa fails to cure the deficiencies of Karasawa, Yamagishi '706, and Itohiya '759, and Petitioners fail to even allege so. Pet. 78. Petitioners only cite Ohzawa in relation to Claim 2's recitation of "wherein an optical axis of said first and second lens group is inclined to a normal line at a center of a surface of said image display element." *Id.*

Therefore, Petitioners fail to establish that Ground 6 would have been obvious based on Karasawa, Yamagishi '706, Itohiya '759, and Ohzawa.

G. Ground 7: Petitioners Fail to Establish That Claim 3 Would Have Been Obvious Based on Karasawa, Yamagishi '706, Itohiya '759, and Itohiya '986

Claim 3 depends on claim 1. Therefore, for at least the same reasons presented above in relation to claim 1 in Ground 5, Petitioners fail to establish that claim 3 would have been obvious based on Karasawa, Yamagishi '706, and Itohiya '759. *See supra* Section VI.E.

Itohiya '986 fails to cure the deficiencies of Karasawa, Yamagishi '706, and Itohiya '759. For example, for the reasons provided above in relation to Ground 1, Itohiya '986 fails to disclose or render obvious limitation [1.8]. *See supra* Sections

VI.A.2.

Therefore, Petitioners fail to establish that Ground 6 would have been obvious based on Karasawa, Yamagishi '706, Itohiya '759, and Itohiya '986.

VII. CONCLUSION

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

Dated: June 10, 2025

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Case IPR2025-0477
Patent No. 7,850,313
Patent Owner's Preliminary Response

CERTIFICATE OF SERVICE

I hereby certify that on this 10th day of June, 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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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 6,916 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

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