NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

MOTOROLA MOBILITY LLC,
Appellant

v.

LARGAN PRECISION CO., LTD.,
Appellee

2024-1414

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2022-01210.

Decided: September 15, 2025

JOHN D. VANDENBERG, Klarquist Sparkman, LLP, Portland, OR, argued for appellant. Also represented by SARAH ELISABETH JELSEMA, ANDREW M. MASON, FRANK MORTON-PARK.

KEVIN RUSSELL, Russell & Woofter LLC, Washington, DC, argued for appellee. Also represented by DANIEL WOOFTER; ROBERT PARRISH FREEMAN, JR., Maschoff Brennan P.L.L.C., Park City, UT.

Before CHEN, LINN, and HUGHES, *Circuit Judges*.

CHEN, *Circuit Judge.*

Motorola Mobility LLC (Motorola) appeals the final written decision of the Patent Trial and Appeal Board (Board) in an *inter partes* review upholding claims 1–27 of Largan Precision Co., Ltd.'s (Largan's) U.S. Patent No. 9,696,519 ('519 patent). *Motorola Mobility LLC v. Largan Precision Co., Ltd.*, No. IPR2022-01210, 2024 WL 270788 (P.T.A.B. Jan. 24, 2024) (*Decision*). We *affirm*.

BACKGROUND

The '519 patent concerns an imaging optical lens assembly comprising five lens elements. Claim 1 is representative:

> 1. An imaging optical lens assembly, comprising, in order from an object side to an image side:
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> a first lens element with negative refractive power having an object-side surface being concave in a paraxial region thereof;
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> a second lens element having positive refractive power;
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> a third lens element having negative refractive power;
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> a fourth lens element having positive refractive power; and
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> a fifth lens element with negative refractive power having an image-side surface being concave in a paraxial region thereof, and at least one convex shape in an off-axial region on the image-side surface;
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> wherein the imaging optical lens assembly has a total of five lens elements;

> and wherein a curvature radius of the object-side surface of the first lens element is R1, a curvature radius of an object-side surface of the second lens element is R3, a curvature radius of an image-side surface of the second lens element is R4, a focal length of the imaging optical lens assembly is f, a focal length of the third lens element is f3, a focal length of the fifth lens element is f5, and the following conditions are satisfied:
>
> $|R4/R3|<1.0$;
>
> $f5/f3<1.0$;
>
> $-10.0<R1/f<0$.

'519 patent at claim 1.

Motorola filed an *inter partes* review petition challenging claims 1–27 of the '519 patent as unpatentable under 35 U.S.C. § 103 over Chung[1] in view of Sekine,[2] both of which disclose optical lens systems. Motorola argued that Chung Embodiments 11 and 12 met all claim limitations except the final R1/*f* limitation, which Sekine disclosed. *See* J.A. 187–95. Motorola further contended that a skilled artisan would have been motivated to apply Sekine's R1/*f* teaching to Chung to maintain image quality while increasing the field of view. *See* J.A. 181–82.

Further, Motorola explained that a skilled artisan would have turned to a lens design program, such as ZEMAX, to optimize *R*1/*f* by balancing competing objectives of a short total track length, a wide field of view, and improved image quality. J.A. 184. Accordingly, Motorola's expert presented ZEMAX modeling evidence to confirm

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[1] U.S. Patent Application Publ'n No. 2015/0098137 (Chung).

[2] U.S. Patent Application Publ'n No. 2013/0182339 (Sekine).

that "a [skilled artisan] would have had a reasonable expectation of success and required no undue experimentation" in applying Sekine's *R*1/*f* teachings to Chung. J.A. 184, 237.

The Board found that Motorola did not prove a motivation to combine Chung with Sekine. *See Decision*, 2024 WL 270788 at *13–15. The Board highlighted differences in the systems of Chung and Sekine that would lead a skilled artisan to doubt that Sekine's teachings could apply to Chung. *See id.* at *13. Even "assuming that Sekine's teachings would apply to Chung despite their different systems," the Board agreed with Largan that there was insufficient evidence to support that a skilled artisan would consider Sekine's teachings helpful because Sekine disclosed an inferior lens system with poorer image quality and field of view. *Id.*; *see id.* at *13–15. The Board did not consider Motorola's ZEMAX evidence, which it determined "were relied on in the Petition only for the purpose of showing a reasonable expectation of success." *Id.* at *15. Because the Board found no motivation to combine, it did not address reasonable expectation of success. *Id.*

As a result, the Board concluded that Motorola had not met its burden of proving the claims are unpatentable. *Id.* at *17. This appeal followed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

Motorola argues on appeal that the Board adopted a legally incorrect framing of the motivation-to-combine argument by, *inter alia*, ignoring the asserted motivation and instead focusing on differences between embodiments of the references. Specifically, Motorola contends that a skilled artisan seeking to improve the field of view in Chung would have looked to Sekine's R1/*f* teaching to balance the wider fields of view with maintaining image quality and track length.

We are not persuaded the Board committed reversible error. The Board expressly acknowledged Motorola's asserted motivation, stating, "[p]etitioner contends that a [skilled artisan] implementing Chung would have been motivated to incorporate Sekine's teachings on maintaining image quality at wider fields of view." *Decision*, 2024 WL 270788 at *6; *see also id.* at *15 ("Petitioner further argues that Patent Owner ignores that lens design involves tradeoffs, for example, sacrificing image quality for a wider FOV."). The Board considered Motorola's balancing motivation and rejected it for fact-based reasons.

First, the Board found that a skilled artisan would have a reason to doubt that Sekine's R1/*f* teachings could have usefully applied to Chung given the "significant differences" in the two systems: Chung's embodiments each had a negative first lens and a positive second lens, while Sekine had the opposite configuration.[3] *Id.* at *13–15. Second, the Board found that Sekine disclosed an inferior lens

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[3] Motorola also argues that the Board improperly relied on the differences in lens polarities because Largan raised this argument in its preliminary response but not in its post-Institution response. However, the Board properly considered this argument because Largan re-raised this issue in response to Motorola's reply. *See* J.A. 7072 (in its sur-reply to Motorola's argument that both systems used "classic retrofocus concepts," Largan argued that Sekine was "not a retrofocus lens system" because it "teaches a *positive* front lens element"). Motorola did not move to strike Largan's purportedly improper argument below. Furthermore, even "assuming that Sekine's teachings would apply to Chung despite their different systems," the Board found insufficient evidence that a skilled artisan would have considered Sekine's teachings to improve Chung, as Sekine disclosed an inferior lens system. *Decision*, 2024 WL 270788 at *13–15.

system with poorer image quality and field of view, such that a skilled artisan would not have looked to Sekine to improve Chung. *Id*. at *13–14. Third, the Board found that Sekine's teaching of shortening track length would be "inapplicable" to Chung's embodiments because of differences in lens shapes. *Id*. at *14.

Motorola essentially disputes the Board's factual findings, which are properly supported by substantial evidence. *See* J.A. 30–40. Nor was it legal error for the Board to consider how the embodiments of Chung differed from the embodiments of Sekine. Motorola's asserted motivation depended on balancing image quality, field of view, and total track length, and the Board's comparison of the differences in such values between the two references directly addressed that balance. *See id*. at *14.

Motorola additionally argues that the Board improperly limited its ZEMAX optimization evidence as pertaining only to reasonable expectation of success, and thus erred in not considering it as part of the motivation to combine analysis.

We find no reversible error. Motorola's ZEMAX evidence simply confirms the combination's feasibility—that a skilled artisan *could* apply Sekine's teaching to Chung—not that a skilled artisan *would* have been motivated to do so. Indeed, Motorola itself described the evidence as "*confirm[ing]* obviousness," not independently establishing motivation. Motorola Op. Br. 18 (emphasis added); *see* J.A. 184 ("ZEMAX modeling confirms that a [skilled artisan] would have had a reasonable expectation of success and required no undue experimentation . . . ."); *id.* at 195 (same); J.A. 712, 729 (Motorola's expert declaration stating same). The Board also noted that computer-aided optimization of a lens-system can "lead[] to a nearly infinite variety of possible combinations of the lens parameters." *Decision*, 2024 WL 270788 at *12. The mere fact that a combination is possible does not establish that a skilled artisan would be

motivated to pursue it. *See Adidas AG v. Nike, Inc.*, 963 F.3d 1355, 1359 (Fed. Cir. 2020) ("The obviousness inquiry does not merely ask whether a skilled artisan could combine the references, but instead asks whether 'they would have been motivated to do so.'").

Thus, even if the Board erred in characterizing the ZEMAX evidence as only relevant to reasonable expectation of success, Motorola has not shown that this evidence would have altered the Board's finding of no motivation to combine the references—a finding that rested on multiple, factually supported grounds.

We have considered Motorola's remaining arguments and find them unpersuasive. For the foregoing reasons, we *affirm*.

AFFIRMED