

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE, INC.,  
Petitioner,

v.

COREPHOTONICS LTD.,  
Patent Owner.

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IPR2020-00905  
Patent 10,225,479 B2

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Before GREGG I. ANDERSON, JOHN F. HORVATH, and  
MONICA S. ULLAGADDI, *Administrative Patent Judges*.

HORVATH, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision on Remand  
Determining All Challenged Claims Unpatentable  
*35 U.S.C. § 318(a)*

## I. INTRODUCTION

### A. Background and Summary

Apple, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–16, 18, 23–38, and 40 (“the challenged claims”) of U.S. Patent No. 10,225,479 B2 (Ex. 1001, “the ’479 patent”). Paper 3 (“Pet.”), 9. Corephotonics Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). Upon consideration of the Petition and Preliminary Response, we instituted *inter partes* review of all challenged claims on all grounds raised. Paper 10 (“Dec. Inst.”).

Patent Owner filed confidential (Paper 15) and public (Paper 39) versions of its Response to the Petition. *See* Paper 39 (“PO Resp.”).<sup>1</sup> Petitioner filed confidential (Paper 24) and public (Paper 40) versions of a Reply. *See* Paper 40 (“Pet. Reply”). Patent Owner filed a Sur-Reply. *See* Paper 32 (“PO Sur-Reply”). An oral hearing was held on August 12, 2021, and the hearing transcript is included in the record. *See* Paper 49 (“Tr.”).

We issued a Final Written Decision that found Petitioner had failed to demonstrate the challenged claims were unpatentable based on our construction of the term “a fused image with a point of view (POV) of the Wide camera,” which we construed to mean “a fused image having a Wide perspective POV and a Wide position POV.” Paper 51 (“Final Dec.”), 9–12. Although finding the case presented “a close issue of claim construction,” the Court of Appeals for the Federal Circuit construed the term to require a fused image that “maintain[s] Wide perspective point of view or Wide position point of view, but does not require both.” *Apple Inc. v.*

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<sup>1</sup> Unless otherwise noted, we cite to the public versions of the papers in this proceeding.

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(“*Corephotonics*”). The Federal Circuit, therefore, vacated our Final Written Decision and remanded the case “for further proceedings in view of this claim construction.” *Id.* at 1359.

This is a Final Written Decision on Remand under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons set forth below, we find Petitioner has shown by a preponderance of evidence that claims 1–16, 18, 23–38, and 40 of the ’479 patent are unpatentable.

*B. Real Parties-in-Interest*

Petitioner and Patent Owner identify themselves, respectively, as the real parties-in-interest. Pet. 1; Paper 5, 1.

*C. Related Matters*

Petitioner and Patent Owner identify *Corephotonics Ltd. v. Apple Inc.*, 5:19-cv-04809 (N.D. Cal.), as a district court proceeding that can affect or be affected by this proceeding, and Petitioner also identifies IPR2020-00906 as an *inter partes review* that can affect or be affected by this proceeding. Pet. 1; Paper 5, 1. In addition, we note that the ’479 patent is part of a family of patents and patent applications that include at least U.S. Patent Nos. 9,185,291, 9,661,233, 10,015,408, and 10,326,942. Ex. 1001, code (63). Many of these patents were or currently are involved in *inter partes review* proceedings that could affect or be affected by a decision in this proceeding, including IPR2018-01348, IPR2020-00487, IPR2020-00488, IPR2020-00489, and IPR2020-00860.

*D. Evidence Relied Upon<sup>2</sup>*

Reference		Effective Date	Exhibit
Parulski	US 7,859,588 B2	Dec. 28, 2010	1005
Richard Szeliski, <i>Computer Vision Algorithms and Applications</i> , 468–503 (2011) (“Szeliski”)		2011	1013
Konno <sup>3</sup>	JP 2013/106289 A	May 30, 2013	1015
Stein	US 8,908,041 B2	Feb. 7, 2013 <sup>4</sup>	1023
Segall	US 8,406,569 B2	Mar. 26, 2013	1024

*E. Instituted Grounds of Unpatentability*

We instituted review on the following grounds:

Ground	Claims	35 U.S.C. §	References
1	1, 10–14, 16, 18, 23, 32–36, 38, 40	103(a)	Parulski, Konno
2	2–4, 24–26	103(a)	Parulski, Konno, Szeliski
3	5–9, 27–31	103(a)	Parulski, Konno, Szeliski, Segall
4	15, 37	103(a)	Parulski, Konno, Stein

<sup>2</sup> Petitioner also relies upon the Declarations of Fredo Durand, Ph.D. (Exs. 1003, 1038) and José Sasián, Ph.D. (Ex. 1021).

<sup>3</sup> Konno is a certified translation of a Japanese Patent Application originally published in Japanese. *See* Ex. 1015, 34–59.

<sup>4</sup> Petitioner identifies Stein as prior art under 35 U.S.C. § 102(a)(2) based on the February 7, 2013 filing date of a provisional application to which Stein claims priority. *See* Pet. 9. Patent Owner does not dispute this. *See* PO Resp. 1–47.

## II. ANALYSIS

### A. The '479 Patent

The '479 patent is directed to “a dual-aperture zoom imaging system (also referred to simply as ‘digital camera’ or ‘camera’).” Ex. 1001, 6:21–23. Figure 1A, reproduced below, illustrates a dual-aperture zoom digital camera 100.

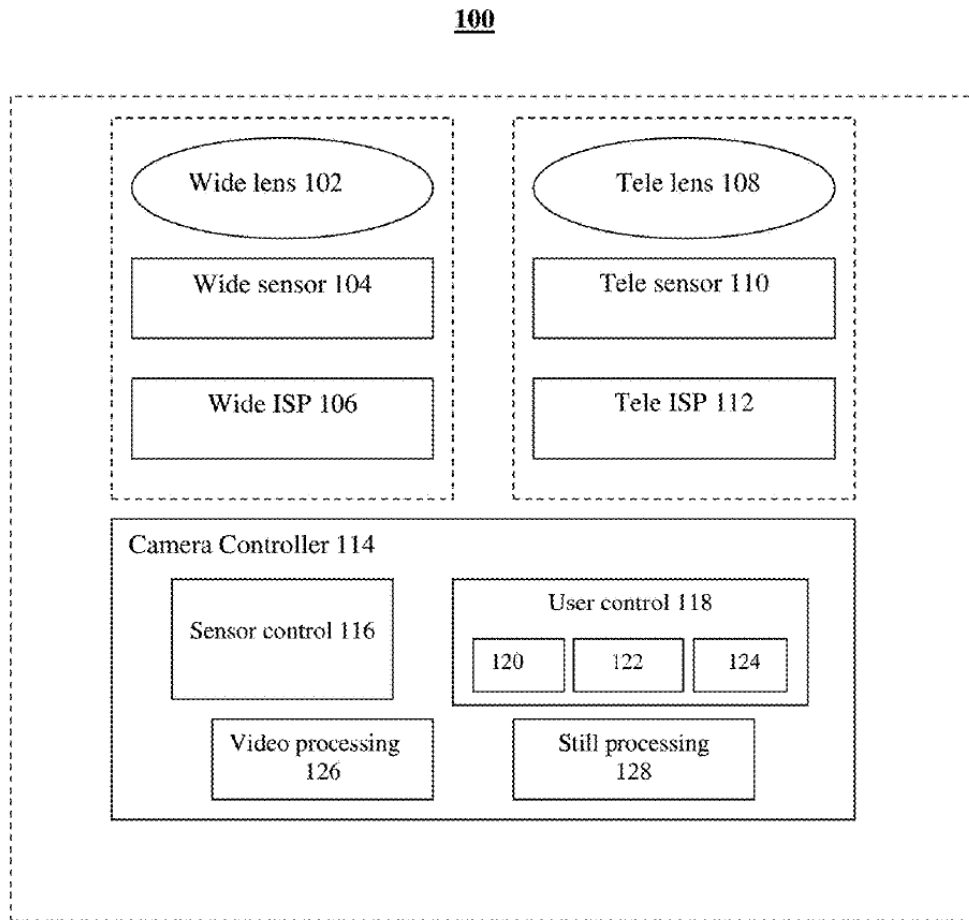


FIG. 1A

Figure 1A is a “block diagram illustrating a dual-aperture zoom” digital camera 100. *Id.* at 5:64–65. Camera 100 includes a wide imaging subsystem consisting of wide lens 102, wide sensor 104, and wide image signal processor (“ISP”) 106, and a tele imaging subsystem consisting of tele lens 108, tele sensor 110, and tele ISP 112. *Id.* at 6:24–29.

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