

# EXHIBIT 32-5

# EXHIBIT 4

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571-272-7822

Paper 9  
Date: January 28, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTEL CORPORATION,  
Petitioner,

v.

PARKERVISION, INC.,  
Patent Owner.

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IPR2020-01302  
Patent 7,539,474 B2

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Before MICHAEL R. ZECHER, BART A. GERSTENBLITH, and  
IFTIKHAR AHMED, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

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

IPR2020-01302  
Patent 7,539,474 B2

## I. INTRODUCTION

### A. Background

Intel Corporation (“Petitioner”) filed a Petition (Paper 3, “Pet.”) requesting institution of *inter partes* review of claims 1, 3, 4, 7, and 9–12 (“the Challenged Claims”) of U.S. Patent No. 7,539,474 B2 (Ex. 1001, “the ’474 patent”). ParkerVision, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 8, “Prelim. Resp.”).

An *inter partes* review may be instituted only if “the information presented in the petition . . . and any [preliminary] 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(a) (2018). For the reasons given below, Petitioner has established a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims of the ’474 patent. Accordingly, we institute an *inter partes* review of claims 1, 3, 4, 7, and 9–12 of the ’474 patent on all grounds raised in the Petition.

### B. Related Proceedings

Petitioner and Patent Owner identify the following related matter: *ParkerVision, Inc. v. Intel Corp.*, No. 6:20-cv-108-ADA (W.D. Tex.) (“the related litigation”). Pet. 10; Paper 7 (Patent Owner’s Mandatory Notices), 2. In addition, Petitioner filed a petition challenging several claims of U.S. Patent No. 7,110,444 B1, which is related to the ’474 patent, in IPR2020-01265. Pet. 10.

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*C. Real Parties in Interest*

Petitioner identifies Intel Corporation as the real party in interest.  
Pet. 10. Patent Owner identifies ParkerVision, Inc. as the real party in interest. Paper 7, 2.

*D. The Asserted Grounds of Unpatentability and Declaration Evidence*

Petitioner challenges the patentability of claims 1, 3, 4, 7, and 9–12 of the '474 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. § <sup>1</sup>	Reference(s)/Basis
1, 3, 4, 9–11	102(b)	Larson <sup>2</sup>
1, 3, 4, 7, 9–11	103(a)	Larson, Butler <sup>3</sup>
12	102(e)	Arpaia <sup>4</sup>

Pet. 12. Petitioner supports its challenge with a Declaration by Vivek Subramanian, Ph.D. (Ex. 1002, “the Subramanian Declaration”), a Declaration by Sylvia D. Hall-Ellis, Ph.D. (Ex. 1021), and a Declaration by Christopher Ernst (Ex. 1022).

*E. The '474 Patent*

The '474 patent is directed to “[m]ethods, systems, and apparatuses for down-converting an electromagnetic (EM) signal by aliasing the EM

<sup>1</sup> The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102 and 103 that became effective on March 16, 2013. Because the '474 patent has an effective filing date before March 16, 2013, we apply the pre-AIA versions of the statutory bases for unpatentability.

<sup>2</sup> *RF and Microwave Circuit Design for Wireless Communications* (Lawrence E. Larson, ed., Artech House Publishers 1996) (Ex. 1005, “Larson”).

<sup>3</sup> U.S. Patent No. 4,603,436, issued July 29, 1986 (Ex. 1006, “Butler”).

<sup>4</sup> U.S. Patent No. 6,192,225 B1, issued Feb. 20, 2001 (Ex. 1007, “Arpaia”).

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