

EXHIBIT 14

Trials@uspto.gov
571.272.7822

Paper No. 8
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DR. MICHAEL FARMWALD and RPX CORPORATION,
Petitioner,

v.

PARKERVISION, INC.,
Patent Owner.

Case IPR2014-00946
Patent 6,266,518 B1

Before MICHAEL R. ZECHER, BART A. GERSTENBLITH, and
JON B. TORNQUIST, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

DECISION

Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. *Background*

Dr. Michael Farmwald and RPX Corporation (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of *inter partes* review of claims 1, 27, 82, 90, and 91 of U.S. Patent No. 6,266,518 B1 (Ex. 1002, “the ’518 patent”). ParkerVision, Inc. (“Patent

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Owner”) timely filed a Preliminary Response (Paper 7, “Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314.

Under 35 U.S.C. § 314(a), an *inter partes* review may be instituted only if “the information presented in [the Petition] 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.” *Inter partes* review is instituted only if the petition supporting the asserted ground demonstrates “that there is a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable.” 37 C.F.R. § 42.108(c).

For the reasons given below, on this record we find that Petitioner has established a reasonable likelihood of prevailing only with respect to claims 1, 82, 90, and 91 of the ’518 patent. Accordingly, we institute an *inter partes* review of the ’518 patent as to these claims on the grounds set forth below.

B. Related Proceedings

The parties represent that the ’518 patent is asserted in *ParkerVision, Inc. v. Qualcomm, Inc.*, No. 3:11-cv-00719 (M.D. Fla.). Pet. 1; Paper 5, 1. Petitioner also filed an additional petition for *inter partes* review of U.S. Patent No. 6,061,551 (“the ’551 patent”)¹ in IPR2014-00947. Paper 5, 1.

¹ The application issuing as the ’518 patent is a continuation of U.S. Application No. 09/176,022, which issued as the ’551 patent. Ex. 1002 at [63]; Pet. 4.

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C. The Prior Art

Petitioner relies on the following prior art references:

Polly Estabrook, *The direct conversion receiver: Analysis and design of the front-end components*, 1–396 (1989) (Ph.D. diss., Stanford Univ.) (Ex. 1022, “Estabrook”);

Peter A. Weisskopf, *Subharmonic Sampling of Microwave Signal Processing Requirements*, MICROWAVE JOURNAL 239–40, 242–44, 246–47 (May 1992) (Ex. 1023, “Weisskopf”); and

G. Avitabile, et al., *S-band digital downconverter for radar applications based on GaAs MMIC fast sample-and-hold*, 143 (6) IEE PROC.- CIRCUITS, DEVICES, AND SYST. 337–42 (1996) (Ex. 1024, “Avitabile”).

D. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1, 27, 82, 90, and 91 of the ’518 patent on the following grounds:²

Reference(s)	Basis	Claim(s) challenged
Estabrook	§ 102(b)	1, 27, 82, 90, and 91
Avitabile	§ 102(b)	1, 27, 82, 90, and 91
Weisskopf	§ 102(b)	1, 27, 82, 90, and 91

E. The ’518 Patent

The ’518 patent is directed to methods and apparatuses for down-converting an electromagnetic (EM) signal by aliasing the EM signal. Ex. 1002, Abstract. The methods and apparatuses operate by receiving an

² Petitioner supports its challenge with a declaration executed by Asad A. Abidi, Ph.D. on June 7, 2014 (Ex. 1004, “Abidi Declaration”).

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EM signal and an aliasing signal having an aliasing rate. *Id.* at 3:1–3. The EM signal is aliased according to the aliasing signal to down-convert the EM signal. *Id.* at 3:3–4. The EM signal can be down-converted to an intermediate frequency (IF) signal, a demodulated baseband signal, or a non-FM (frequency modulated) signal. *Id.* at 1:31–35. The term “aliasing” refers “to both down-converting an EM signal by under-sampling the EM signal at an aliasing rate, and down-converting an EM signal by transferring energy from the EM signal at the aliasing rate.” *Id.* at 3:4–9. An aliasing rate is a sampling rate that “is equal to, or less than, twice the frequency of the EM carrier signal,” and “[p]referably, . . . is much less than the frequency of the carrier signal.” *Id.* at 22:8–11.

Figure 82A of the '518 patent is reproduced below:

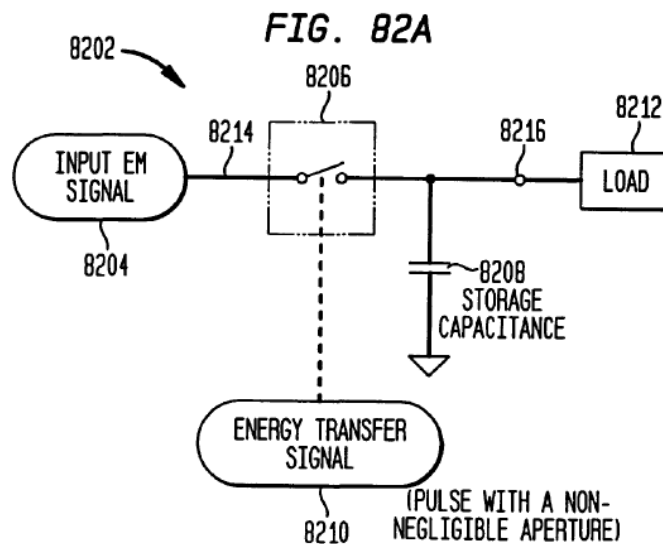


Figure 82A illustrates an exemplary energy transfer system for down-converting an input EM signal. *Id.* at 66:11–12. In this embodiment, energy transfer signal 8210 includes a train of energy transfer pulses having non-negligible pulse widths. *Id.* at 66:26–27. These pulses control switch

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