

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUMENTUM HOLDINGS, INC., LUMENTUM, INC.
AND LUMENTUM OPERATIONS, LLC

Petitioners

v.

CAPELLA PHOTONICS, INC.

Patent Owner

Case No. IPR2015-00731

Patent No. RE 42,368

**PETITIONERS' REPLY
TO PATENT OWNER RESPONSE**

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List of New Exhibits Cited in this Reply

Exhibit 1040: June 30, 2015 Deposition transcript of Dr. Alexander V. Sergienko from related proceeding IPR2014-01166

Exhibit 1041: Excerpts from Abdul Al-Azzawi, *Fibre Optics Principles and Practices* (CRC Press, Taylor & Francis Group, 2007) (containing additional excerpts to the copy produced by Patent Owner at Ex. 2020

Exhibit 1042: Excerpts from Rajiv Ranaswami & Kumar N. Sivarajan, *Optical Networks, A Practical Perspective*, (2nd Ed., Morgan Kaufmann Publishers, 2002)

Exhibit 1043: Excerpts from Webster's Ninth New Collegiate Dictionary, (Miriam-Webster, Inc., 1991) ("providing" and "reflect")

Petitioner also incorporates herein all exhibits from the IPR2015-00731 petition.

I. INTRODUCTION

The arguments presented by Patent Owner (“PO”) in its Patent Owner Response (“PO Response”) do not warrant any change to the Board’s determination in the Decision (Paper no. 8), ordering *inter partes* review of challenged claims 1-6, 9-13 and 15-22. All of the challenged claims are obvious and unpatentable.

Petitioners point out that the issues in this proceeding are substantially the same as those in *Inter Partes* Review No. 2014-01166, a related proceeding in which the Board issued a Final Written Decision on January 28, 2016, finding the identical set of challenged claims unpatentable over combinations of Bouevitch, Smith, Lin and Dueck. The challenge bases in the present proceeding are similar to those in *Inter Partes* Review No. 2014-01166, except that Petitioners rely upon Sparks instead of Smith for disclosure of a two-axis MEMS mirror that is used for both switching and power control in optical switching devices.

II. RESPONSES TO PATENT OWNER’S ARGUMENTS

A. **It Was Obvious and Not Hindsight to Combine Features of Bouevitch, Sparks, Lin and Dueck [Corresponds to PO Response § III.A.]**

1. Petitioners Do Not Combine Disparate Embodiments of Bouevitch

Petitioners rely only on the Fig. 11 embodiment of Bouevitch in connection with the challenge bases asserted in the Petition. In particular, and contrary to the

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