

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. IPR2015-00739

Patent No. RE 42,678

**PETITIONERS' REPLY
TO PATENT OWNER RESPONSE**

Table of Contents

I. INTRODUCTION 1

II. RESPONSES TO PATENT OWNER’S ARGUMENTS..... 1

 A. It Was Obvious and Not Hindsight to Combine Features of Bouevitch, Sparks, Lin and Dueck [Corresponds to PO Response § III.A.] 1

 1. Petitioners Do Not Combine Disparate Embodiments of Bouevitch..... 1

 2. It Was Obvious to Combine Sparks Two-Axis Mirrors with the Fig. 11 Embodiment of Bouevitch 3

 B. Bouevitch Does Not Teach Away From Misalignment for Power Control [Corresponds to PO Response § III.B.]..... 4

 C. Bouevitch and Sparks are Not Incompatible Technologies [Corresponds to PO Response § III.C.]..... 6

 D. Bouevitch and Dueck are Not Incompatible Technologies [Corresponds to PO Response § III.D.]..... 7

 E. Bouevitch Teaches Multiple Fiber Collimators Providing Input, Output and Other Ports [Corresponds to PO Response § III.E.]..... 9

 1. Bouevitch’s Collimators “Provide” the Ports 9

 a. The Ordinary Meaning of “Providing” 9

 b. Bouevitch’s Microlenses “Provide” the Ports..... 10

 c. The Claims Do Not Recite “Collimator Ports” 13

 2. “Ports” Include Circulator Ports..... 14

 3. The Patentee Did Not Disavow Circulator Ports 14

 a. PO’s Evidence Does Not Meet the High Standard for Disavowal..... 14

 b. The ’678 Patent Expressly Encompasses Circulators..... 15

 c. The Claims’ Preambles Do Not Exclude Circulators 16

 F. Bouevitch Reflects Light Into the Ports [Corresponds to PO Response § III.F.]..... 16

G. Continuous Two-Axis Mirror Control Was Obvious [Corresponds to PO Response § III.G.]	17
1. PO Mischaracterizes the Challenge Bases of the Petition	17
2. Construction of “Continuously Controllable”	18
3. Sparks Teaches Continuous Control	18
4. Lin Teaches Continuous Control.....	19
H. It Was Obvious to Combine Sparks and Lin [Corresponds to PO Response § III.H.].....	20
I. It Was Obvious to Use Sparks' Servo Control in Bouevitch [Corresponds to PO Response § III.I.]	22
J. PO's Evidence of “Industry Adoption” Does Not Demonstrate Secondary Considerations [Corresponds to PO Response § IV.]	23
III. CONCLUSION	25

List of Exhibits Cited in this Reply

- Exhibit 1051: June 30, 2015 Deposition transcript of Dr. Alexander V. Sergienko from related proceeding IPR2014-01276
- Exhibit 1052: Excerpts from Webster's Ninth New Collegiate Dictionary, (Miriam-Webster, Inc., 1991) ("providing" and "reflect")
- Exhibit 1053: 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 1054: Excerpts from Rajiv Ranaswami & Kumar N. Sivarajan, *Optical Networks, A Practical Perspective*, (2nd Ex., Morgan Kaufmann Publishers, 2002)

Petitioner also incorporates herein all exhibits from the IPR2015-00739 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. 7), ordering *inter partes* review of challenged claims 1-4, 9, 10, 13, 17, 19-23, 27, 29, 44-46, 53 and 61-65. 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. 2014-01276, a related proceeding in which the Board issued a Final Written Decision on February 17, 2016, (Paper 40) 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. 2014-01276, 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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