UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

Cisco Systems, Inc., Ciena Corporation, Coriant Operations, Inc., Coriant (USA) Inc., and Fujitsu Network Communications, Inc., Petitioner

v.

Capella Photonics, Inc.
Patent Owner

Inter Partes Review Nos. IPR2014-01276<sup>1</sup> Patent Nos. RE42,678

# TRANSMITTAL ACCOMPANYING PETITIONER'S DEMONSTRATIVES FOR ORAL ARGUMENT

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<sup>&</sup>lt;sup>1</sup> Case IPR2015-00894 has been joined with this proceeding.



Case No. IPR2014-01276 Atty. Docket No. CSCO-002/00US [034855-2015] (RE42,678) Transmittal Accompanying Cisco's Demonstratives for Oral Argument

### **EXHIBIT LIST**

Ex. No.	Description
1001	U.S. Reissued Patent No. RE42,678 to Wilde et al. (" '678 patent")
1002	File History of U.S. Patent No. RE42,678 to Wilde et al. (" '678 File History")
1003	U.S. Patent No. 6,498,872 to Bouevitch et al. ("Bouevitch")
1004	U.S. Patent No. 6,798,941 to Smith et al. ("Smith Patent," or "Smith")
1005	Provisional Patent App. No. 60/234,683 ("Smith Provisional")
1006	U.S. Patent No. 6,798,992 to Bishop et al. ("Bishop")
1007	U.S. Patent No. 6,507,421 to Bishop et al. ("Bishop '421")
1008	Provisional Patent App. No. 60/277,217 ("'368 Provisional")
1009	U.S. Patent No. 6,253,001 to Hoen ("Hoen")
1010	U.S. Patent No. 5,661,591 to Lin at al. ("Lin")
1011	Doerr et al., An Automatic 40-Wavelength Channelized Equalizer, IEEE Photonics Technology Letters, Vol., 12, No. 9, (Sept. 2000)
1012	U.S. Patent No. 5,936,752 to Bishop et al. ("Bishop '752")
1013	Excerpt from New World English Dictionary ("servo" and "servomechanism")
1014	Excerpt from Collins English Dictionary - Complete & Unabridged 10th Edition. HarperCollins Publishers. http://dictionary.reference.com/browse/feedback (accessed: May 07, 2014) ("feedback")
1015	Ford et al., Wavelength Add–Drop Switching Using Tilting Micromirrors, Journal of Lightwave Technology, Vol. 17, No. 5 (May



### Case No. IPR2014-01276 Atty. Docket No. CSCO-002/00US [034855-2015] (RE42,678) Transmittal Accompanying Cisco's Demonstratives for Oral Argument

Ex. No.	Description
	1999) ("Ford")
1016	U.S. Patent No. 6,069,719 to Mizrahi ("Mizrahi")
1017	U.S. Patent No. 6,204,946 to Aksyuk et al. ("Aksyuk")
1018	U.S. Patent Application Publication No. US 2002/0105692 to Lauder et al. ("Lauder")
1019	Giles et al., Reconfigurable 16-Channel WDM DROP Module Using Silicon MEMS Optical Switches, IEEE Photonics Technology Letters, Vol. 11, No. 1, (Jan. 1999) ("Giles 16-Channel WDM DROP Module")
1020	Andrew S. Dewa, and John W. Orcutt, <i>Development of a silicon 2-axis micro-mirror for optical cross-connect</i> , Technical Digest of the Solid State Sensor and Actuator Workshop, Hilton Head Island, SC, June 4-8, 2000) at pp. 93-96 ("Dewa")
1021	U.S. Patent No. 6,011,884 to Dueck et al. ("Dueck")
1022	U.S. Patent No. 6,243,507 to Goldstein et al. ("Goldstein '507")
1023	U.S. Patent No. 6,567,574 to Ma, et al. ("Ma")
1024	U.S. Patent No. 6,256,430 to Jin, et al. ("Jin")
1025	U.S. Patent No. 6,631,222 to Wagener et al. ("Wagener")
1026	U.S. Patent No. 5,875,272 to Kewitsch et al. ("Kewitsch")
1027	U.S. Patent No. 6,285,500 to Ranalli at al. ("Ranalli")
1028	Declaration of Dr. Dan Marom
1029	Curriculum Vitae of Dr. Dan Marom
1030	James A. Walker et al., Fabrication of a Mechanical Antireflection Switch for Fiber-to-the-Home Systems, 5 J. Microelectromechanical Sys.



Transmittal Accompanying Cisco's Demonstratives for Oral Argument

Ex. No.	Description
LA. NU.	Description
	45, 46-47, Fig. 3 (1996) ("Walker")
1031	U.S. Patent No. 5,414,540 to Patel et al. ("Patel")
1032	Borella, et al., Optical Components for WDM Lightwave Networks,
	Proceedings of the IEEE, Vol. 85, NO. 8, August 1997 ("Borella")
1033	U.S. Patent No. 6,928,244 to Goldstein et al. ("Goldstein '244")
1034	Steffen Kurth et al., Silicon mirrors and Micromirror Arrays for Spatial
	Laser Beam Modulation, Sensors and Actuators, A 66, July 1998
1035	C. Randy Giles and Magaly Spector, The Wavelength Add/Drop
	Multiplexer for Lightwave Communication Networks, Bell Labs
	Technical Journal, (JanMar. 1999) ("Giles and Spector")
1036	U.S. Patent No. 5,872,880 to Maynard (the "Maynard patent")
1037	R.E. Wagner and W.J. Tomlinson, Coupling Efficiency of Optics in
	Single-Mode Fiber Components, Applied Optics, Vol. 21, No. 15, pp.
	2671-2688 (August 1982)
1038	Excerpts from Born et al., PRINCIPLES OF OPTICS, (6th Ed., Pergammon
1000	Press 1984)
1039	Excerpts from Shigeru Kawai, HANDBOOK OF OPTICAL Interconnects (2005)
1040	U.S. Patent No. 6,625,350 to Kikuchi (the "Kikuchi patent")
1040	1
1041	Joseph E. Ford & James A. Walker, <i>Dynamic Spectral Power Equalization Using Micro-Opto-Mechanics</i> , IEEE Photonics
	Technology Newsletter, Vol. 10, No. 10, (Oct. 1998) ("Ford &
	Walker, Spectral Power Equalization")
1042	U.S. Patent No. 5,048,912 to Kunikane et al. ("Kunikane patent")
1043	U.S. Patent No. 5,315,431 to Masuda et al. ("Masuda patent")



Case No. IPR2014-01276 Atty. Docket No. CSCO-002/00US [034855-2015] (RE42,678) Transmittal Accompanying Cisco's Demonstratives for Oral Argument

Ex. No.	Description
1044	S. Yuan, and N. A. Riza, <i>General formula for coupling loss</i> characterization of single mode fiber collimators by use of gradient index rod lenses, Appl. Opt. Vol. 38, No. 10, at 3214-3222, (1999)
1045	Ming C. Wu, Micromachining for Optical and Optoelectronic Systems, Proc. IEEE, Vol. 85, No. 11, at 1833-56 (Nov. 1997) ("Wu, Micromachining")
1046	Sir Isaac Newton, <i>Opticks or a treatise of the reflections</i> , refractions, and inflections and colors of light (1730)
1047	Chikama et al., <i>Photonic Networking Using Optical Add Drop Multiplexers and Optical Cross-Connects</i> , Fujitsu Sco. Tech. J., 35, 1, pp. 46-55 (July 1999)
1048	Richard S. Muller & Kam Y. Lau, <i>Surface-Micromachined Microoptical Elements and Systems</i> , Proceedings of the IEEE, Col. 86, No. 8 (August 1998)
1049	June 30, 2015, Deposition Transcript of Dr. Alexander V. Sergienko ("S. Tr.")
1050	Abdul Al-Azzawi, <i>Fiber Optics: Principles and Practices</i> (CRC Press 2006). ("Al-Azzawi") (containing additional excerpts to the copy produced by Patent Owner at Ex. 2020)
1051	U.S. Patent No. 6,950,609 to Marom ("Marom '609")
1052	Rajiv Ramaswami & Kumar N. Sivarajan, <i>Optical Networks: A Practical Perspective</i> (Morgan Kaufmann Publishers 2000). ("Ramaswami")
1053	FiberStore.com, Optical Circulators (listed under WDM Optical Network->Passive Optical Components->Optical Circulator)
1054	The American Heritage College Dictionary, Houghton Mifflin Co. (1997 3d. Ed.)
1055	Clifford Holliday, <i>Components for R-OADMs '05</i> (B & C Consulting Services & IGI Consulting Inc. 2005). ("Updated Holliday R-OADMs") (containing additional excerpts to the copy produced by Patent Owner at Ex. 2009)
1056	Clifford Holliday, Switching the Lightwave: OXC's – The Centerpiece of All Optical Network (IGI Consulting Inc. & B & C Consulting Services 2001). ("Updated Holliday OXC") (containing



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