Inter Partes Review of USPN RE42,678 Declaration of Timothy J. Drabik, Ph.D. (Exhibit 1016)

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
FUJITSU NETWORK COMMUNICATIONS, INC.
Ciena Corporation,
Coriant Operations, Inc.,
Coriant (USA) Inc., and
Petitioner
v.
CAPELLA PHOTONICS, INC.
Patent Owner
Inter Partes Review Case No. Unassigned

DECLARATION OF TIMOTHY J. DRABIK, Ph.D.

Patent No. RE42,678

Mail Stop "PATENT BOARD" Patent Trial and Appeal Board U.S. Patent and Trademark Office P.O. Box 1450



Inter Partes Review of USPN RE42,678 Declaration of Timothy J. Drabik, Ph.D. (Exhibit 1016)

Alexandria, VA 22313-1450



Inter Partes Review of USPN RE42,678 Declaration of Timothy J. Drabik, Ph.D.

TABLE OF CONTENTS

I.	INTRODUCTION1						
	A.	Background					
	B.	Qual	Qualifications32				
		1.	Education	3 <u>2</u>			
		2.	Career History	3			
		3.	Publications	5			
		4.	Other Relevant Qualifications	6			
II.	THE	' 678]	PATENT	7			
III.		OF DOCUMENTS CONSIDERED IN FORMULATING MY NION87					
IV.	TECHNICAL BACKGROUND						
	A.		Optical switching for telecommunications				
		1.	Fiber cross-connects				
		2.	Wavelength switches	12			
	В.	Free-space optical systems					
		1.	Basic properties of lenses				
		2.	Gaussian light beams	16			
		3.	The "Fourier lens"	19			
		4.	Concave mirrors as focusing elements	20			
		5.	Wavelength-dispersive elements	21			
V.	STATE OF THE ART AT THE TIME OF THE ALLEGED INVENTION						
	A.	Transparent optical switching prior to the alleged invention					
	B.	Reconfigurable Optical Add-Drop Multiplexers					
	C.	Wavelength Selective Switches2'					
	D.	MEMS Mirrors					
VI.	PERSON OF ORDINARY SKILL IN THE ART						
VII.	OVERVIEW OF THE '678 PATENT						
	A.	Opei	ration of the disclosed system of the '678 Patent	33			
		-	•				



Inter Partes Review of USPN RE42,678 Declaration of Timothy J. Drabik, Ph.D.

VIII.	THE CLAIMS OF THE '678 PATENT				
IX.	LEGAL STANDARDS				
	A.	Anticipation			
	B.	Obvi	ousness	37	
X.	CLA	IM CC	ONSTRUCTION	42	
XI.	ANALYSIS OF INVALIDITY				
	A.	Summary of Analysis			
	₽.	Point 1: Claims 61-65 Are Disclosed by Smith			
		1.	Operation of the disclosed system of Smith	46	
		2.	Claim 61	51	
		3.	Claim 62	53	
		4.	Claim 63	53	
		5.	Claim 64	53	
		6.	Claim 65	<mark>54</mark>	
	C.	Point 2: Claims 1-4, 9, 10, 13, 17, 19-23, 27, 29, 44-46 and			
		53 A	re Not Innovative in View of Smith and Carr		
		1.	Claim 1 preamble	57	
		2.	Claim 1 – collimators and ports		
		3.	Claim 1 wavelength separator		
		4.	Claim 1 – beam focuser	58	
		5.	Claim 1 – channel micromirrors	58	
		6.	Claim 2	59	
		7.	Claim 3	60	
		8.	Claim 4	60	
		9.	Claim 9	60	
		10.	Claim 10	61	
		11.	Claim 13	61	
		12.	Claim 17	61	
		13.	Claim 19	<mark>62</mark>	
		14.	Claim 20	<mark>62</mark>	



Inter Partes Review of USPN RE42,678 Declaration of Timothy J. Drabik, Ph.D.

		15.	Claim 21	62	
		16.	Claim 22	<mark>63</mark>	
		17.	Claim 23	<mark>64</mark>	
		18.	Claim 27	<mark>64</mark>	
		19.	Claim 29	64	
		20.	Claim 44	64	
		21.	Claim 45	66	
		22.	Claim 46	66	
		23.	Claim 53	66	
	<u>₽</u> <u>B</u> .	Point <u>31</u> : Claims 1, 9, 10, 13, 17, 19, 44, 53, 61, 64 and 65 Are Not Innovative in View of Bouevitch and Carr			
		1.	Operation of the disclosed system of Bouevitch	<mark>67<u>46</u></mark>	
		2.	Combination of Bouevitch with Carr	70 49	
	<u>EC</u> .	Point 42: Claims 1-4, 19-23, 27, 29, 44-46 and 61-63 Are Not Innovative in View of Bouevitch and Sparks			
	F.	Points 5 and 6: Claims 61–65 Are Not Innovative in View of the Combination of Smith and Tew and Claims 1–4, 9, 10, 13, 17, 19–23, 27, 29, 44–46 and 53 Are Not Innovative in View of the Combination of Smith, Carr and Tew			
	G.	Point 7: Claims 1, 9, 10, 13, 17, 19, 44, 53, 61, 64 and 65 Are Not Innovative in View of the Combination of Bouevitch, Carr and Tew			
	H.	Point 8: Claims 1-4, 20, 27, 44-46 and 61-63 Are Not Innovative in View of the Combination of Bouevitch, Sparks and Tew			
XII.	CON	CLUS	ION	115 88	



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

