Docket No.: C\$LL-643 01-04-2002 FORM PTO-1595 (Modified) U.S. DEPARTMENT OF COMMERCE (Rev. 6-93) Patent and Trademark Office OMB No. 0651-0011 (exp.4/94) Copyright 1994-97 LegalStar P08/REV02 Tab settings → → To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. Name and address of receiving party(ies): 1. Name of conveying party(ies): Haig Charles Tapalian Juha-Pekka Laine Name: The Charles Stark Draper Laboratory, Inc. Internal Address: ☐ Yes ☒ No Additional names(s) of conveying party(ies) 3. Nature of conveyance: Street Address: 555 Technology Square Merger ☐ Security Agreement ☐ Change of Name City: Cambridge State: MA ZIP: 02139 Other Execution Date: September 28 and October 9, 2001 Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: B. Patent No.(s) A. Patent Application No.(s) 09/941.308 Additional numbers attached? Yes ☑ No 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: 7. Total fee (37 CFR 3.41):....\$ 40.00 Name: Elizabeth E. Kim ☒ Enclosed - Any excess or in sufficiency should be Internal Address: McDermott, Will & Emery credited or debited to deposit account ☐ Authorized to be charged to deposit account Street Address: 28 State Street 8. Deposit account number: 50-1133 States MA ZIP: 02109 City: Boston DO NOT USE THIS SPACE 01/03/2002 LMUELLER 00000316 09941308 40.00 DP 01 FC:581 To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy 9. Statement and signature. of the original document. Elizabeth E. Kim November 2, 2001 Elizabeth E. Kim Date Signature Name of Person Signing Total number of pages including cover sheet, attachments, and document: PATENT

REEL: 012409 FRAME: 0322

ASSIGNMENT OF PATENT RIGHTS

We, Haig Charles Tapalian of 359-1F Bolivar Street, Canton, MA 02021 and Juha-Pekka Laine of 534 Beacon Street, Apt. 801, Boston, MA 02215, having invented improvements in a MICROCAVITY-BASED OPTICAL CHANNEL ROUTER described in United States Patent Application having Serial No. 09/941,308, filed August 29, 2001 by our agent(s) and attorney(s), who are authorized to prosecute said application, for good and valuable consideration, receipt of which is hereby acknowledged from The Charles Stark Draper Laboratory, Inc., a Massachusetts Corporation having a principal place of business at 555 Technology Square, Cambridge, MA 02139 USA, and hereinafter Assignee (which term shall include the successors and assigns), do hereby sell, assign and transfer to the Assignee our entire right, title, and interest, in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto, in and to and under said application (which term shall include hereinafter where the context so admits all divisional, continuing, reissue and other patent applications based thereon) and all inventions (which term shall include each and every any part thereof) therein described, and any and all patents and like rights of exclusion (including extensions thereof) of any country which may be granted on or for said inventions or on said application.

And for the same consideration we do also hereby sell, assign and transfer unto the Assignee all our rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty and all other treaties of like purpose in respect of said inventions and said application, and we do hereby authorize the Assignee to apply in our names or in their own name (in a manner to be agreed upon by the Assignee) or their designee, for patents and like rights of exclusion on or for said inventions in all countries, claiming (if the Assignee so desires) the priority of the filing date of said application under the provisions of said Convention, Treaty or any such other Convention or Treaty;

And for the same consideration we do hereby jointly and severally agree for ourselves and for our respective heirs, executors and administrators, promptly upon request of the Assignee, to execute and deliver without further compensation any power of attorney, assignment, original, divisional, continuing, reissue or other application or applications for patent or patents or like rights of exclusion of any country, or other lawful documents and any further assurances that may be deemed necessary or desirable by the Assignee fully to secure to it said right, title, and interest as aforesaid in and to said inventions, application, and said several patents and like rights of exclusion, or any of them, all, however, at the expense of the

And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and the corresponding Official of each country foreign thereto to issue to the Assignee any and all patents and like rights of exclusion which may be granted in any country upon said application or on or for said inventions;

And we do hereby jointly and severally covenant for ourselves and for our respective legal representatives and agree with the Assignee that we have granted no right or license to make, use or sell said inventions to anyone except the Assignee, that prior to the execution of this deed our right, title and interest in and to said inventions has not been otherwise encumbered by us, and that we have not executed and will not execute any instrument in conflict herewith.

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IN WITNESS WHEREOF, we hereunto set our hands and seals on the day and year hereinafter noted. Haig Charles Tapalian 2001, personally appeared Haig Charles Tapalian, and Before me this day of acknowledged the foregoing instrument to be his or her free act and deed. My Commisson Expires Sept. 9, 2005 **SEAL**

, 2001, personally appeared Juha-Pekka Laine, and Before me this day of C acknowledged the foregoing instrument to be his or her free act and deed.

My Commisson Expires Sept. 9, 2005 Notary Public

SEAL

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